RA
421
C3
v. 7
no. 5
cop. 3
Biological
& Medical
Serials

STORAGE

The
Public Health Journal

TORONTO, CANADA.

VOL. VII. MAY, 1916 NO. 5

SOCIAL SERVICE AND HOSPITAL EFFICIENCY

By HELEN R. Y. REID, B.A.

Director Social Service Department of the Victorian Order of Nurses.

MARK TWAIN once said of the New England weather, that "everybody was talking about it, but nobody did anything." In regard to Social Service work some of us are trying to do something and we hope that many will talk about it.

It has been said that cities have no conscience, and this often seems true when we read of typhoid epidemics, the summer slaughter of young babies, the unrestricted prevalence of tuberculosis and the highest death-rate among civilized nations. Doctors and institutions already overtaxed are often left to grapple with hydra-headed evils which the unintelligent and sometimes unscrupulous guardians of civic health and virtue have allowed to grow up in our midst. In Montreal, as elsewhere, we are slowly feeling our way towards a higher standard of efficiency in matters affecting public health and morals. If the civic sense of the value of preventive work lags behind that of the intelligent public, it means more expense to the taxpaying community, a heavier burden on charitable organizations, a greater loss of life and manhood to the country, as well as untold suffering to the family unit and individual.

Such exhibits as the Tuberculosis Exhibit and that of Child Welfare held here not long ago, emphasize the note of prevention which is surely becoming as dominant in Canada as it has become across the border in all medical and charitable work. During the past ten years much has been accomplished in laying bare the needs of our communities along these lines. We are beginning now to realize that it is as great a charity to keep a man well and out of the hospital bed as to care for him after he is in it. Who is there who would not regard it as even a greater service? Is it not better, more decent, and in the end less expensive to keep our jails empty and our schools full, to regulate our liquor traffic and lessen the number of criminals, to see to it that our homes and streets and lanes are sunny, sweet and clean, and that there is room to spare in our insane asylums, our homes for the feeble-minded and our sanataria for tuberculosis? In this great field of preventive work a splendid harvest awaits the efficient and properly trained worker.

In the United States, where the demand for trained workers in all philanthropic activities is recognized as vital to the success and economy of institutional work, Schools of Philanthropy and Social Service have been formed in many of the larger centres. These aim to give professional and technical training to those who desire to enter upon any form of social work. More specifically, students are prepared for service as expert visitors for charitable institutions dealing with the care of families, as matrons or administrators, inspectors (tenement houses, factories, etc.), social service workers in hospitals, workers in clubs and settlements, in the Public Service branches dealing with health, charities and corrections, and investigators of social conditions and institutions. Complete courses of lectures are supplemented by practical work and observation in institutions. These courses

STORAGE

vary in length—a full diploma course in New York and Boston requiring two years, while a medico-social course to fit workers for Hospital Social Service takes, at the Boston School, five months, and in Bellevue Hospital, New York, only three months — the last being a post-graduate course open to nurses only. A large number of nurses and college graduates follow these courses and fit themselves to fill well-paid posts that await them all over the country. Over two hundred students were enrolled last year in the New York School of Philanthropy.

The day has gone by when general service of an all-round kind is considered sufficient in any department of life, be it economic, industrial or professional. The man with the trade commands a better salary than the unskilled laborer, and he is, potentially, a better man because of his wider knowledge and usefulness. We pay more for our expert cooks and French dressmakers than for our "generals" and "the woman in by the day," but we now expect the efficiency that commands the higher salary. We have our specialists in science, medicine and law, and to them we turn for the expert work that cannot be given by general training only. We hope for this high standard of efficiency, and as supporters in time, work and money, we are entitled to expect it in the work of our hospitals and other public institutions.

The social worker is already to be found among church visitors and deaconesses, in the settlements and charity organizations, and wherever visiting is done among the poor. It is in this field that a need is being felt for greater efficiency and for workers whose one specialty—say for nursing or domestic science—has been filled out, and whose mental attitude has been enlarged, by the study under expert direction of the many problems affecting public health. If we have not these workers in our midst, can we not develop them by affording opportunities for study and practical field work through educational agencies already existing here or elsewhere? If we cannot develop them, then let us import them from places where the same need has been felt and answered in the form of Social Service schools and Schools of Philanthropy. The trained worker we must have as well as the efficient volunteer if we hope to do the best preventive work for our cities.

With the fine record of good works and benevolence to our credit, no one can say that Montreal's institutions have not made good use of the material which they have at hand in the way of workers, paid and voluntary. But we cannot stand still. We must either improve our methods or lose ground. It costs money both ways, but the money that is spent for efficient service is a legitimate expense, while there is little or no justification for the ignorance which results in waste and loss of time and money. It is a matter, therefore, of the greatest satisfaction to learn that a step in a direction which will make this possible is already being contemplated by one of our best known educational institutions. It is probable in the near future that a University Extension Course in Practical Hygiene and one in Social Economics will be opened to women desirous of fitting themselves for positions of health inspectors and visitors in the city's service, or of improving themselves as volunteers in any sphere of social work. Practical field work in the study of local institutions, lectures, district visiting and case conferences may possibly be offered by the Charity Organization, and would serve as an additional attraction to the opening up of this new field for women workers. In close connection with this we contemplate with gladness the prospective organization on a more intelligent and comprehensive basis of the Board of Health of our city. The active influence towards this end of such bodies as the City Housing and Planning Association, the City Improvement League, the Local Council of Women—to mention but a few—insures for us in the not distant future an up-to-date Board of Health with a staff of trained inspectors and visitors working with augmented interest and intelligence for the public good.

The medical-social work that has been done in Montreal is easily resumed. Apart from individual efforts, the first organized medico-social service we find in connection with the Victorian Order of Nurses. During the typhoid epidemic in 1910, this Order established a social service department of from 60 to 70 volunteer workers, who, during that serious time, worked to-

wards the relief and rehabilitation of 160 families, and faced the general problems of poverty and sickness with amazing results considering the emergent and volunteer nature of the organization. Besides serving all the needy cases on the district this committee covered every case in the Emergency Hospital and worked in the homes which had often been left desolate by the removal to the hospital of one, two, or three of the members of the household. On the district even more intimately than in the hospital we see how sickness brings poverty, and poverty is, perhaps, the chief cause of sickness; how civic neglect tolerates bad housing, and bad housing carries with it vice and tuberculosis; how contagion spreads through crowded tenements; how lack of knowledge kills babies more than lack of care; and how great is the need of combating that gravest of diseases, ignorance, by the power of education carried into the home and made vital by the inspiring influence of a friendly hand. Be it remembered, too, that no report will ever show the extent or benefit of this most important part of social service work—the work of education and instruction. During the epidemic, the services of the Victorian Order Committee were placed at the disposal of the Royal Victoria and General Hospitals for their typhoids needing after care, and five cases were handled from these sources. Had there been trained workers in the wards who had the time and experience to find the needy ones and thus relieve the nurses and superintendent, doubtless many more cases would have been handed on and helped.

Out of this, however, came great good; for among the volunteers working for the Victorian Order was an earnest band of workers from Melville Presbyterian Church, and they became definitely interested in Hospital Social Service. Permission was obtained to place a partially trained worker in the General Hospital wards to follow up Protestant cases needing care after dismissal. After one year's work, the Hospital became sufficiently alive to the good accomplished—the saving to the institution and the help to the patients, to undertake the payment of the worker's salary, the church still providing the funds necessary for relief emergencies.

A further experiment is now being made in both the Montreal General and Royal Victoria Hospitals. Through the initiative of the Charity Organization Society and the co-operation of the Victorian Order of Nurses, a district nurse has been placed at the disposal of the general out-patient department of each hospital, and a college graduate with special training in domestic science and city health visiting has entered one clinic—the last-mentioned giving practically all her time for a purely nominal fee. Unfortunately, all these workers are not under any supervision or direction, and they are using experimental methods. It remains to be seen whether their work proves sufficiently, not only the benefit of Social Service—this can hardly be a matter for question in the mind of any up-to-date doctor—but also that the time is now ripe to establish Social Service departments as integral parts of their institutions. If our Hospitals and Nursing Associations would take advantage of such post-graduate courses of lectures and practical field work as may be offered by University, Charity Organization Society and District Nursing Association, it would afford those of their nurses who have the spirit for Social Service an opportunity for fitting themselves for any public or institutional work they care to follow. It would soon provide the hospitals with a staff of social workers already acquainted with the routine and administration of the hospital. The advantage to the nurses in thus opening up to them new lines of work is evident.

With a 1912 record of 72,000 out-patient admissions, and 4,582 in the wards, the Montreal General Hospital offers a special opportunity for follow-up care. Situated as it is in the working heart of the city, its clientele includes hundreds of people who are affected with the awful diseases of ignorance and poverty which the trained social worker is better fitted to cope with than the busy doctor. Can we not lend a hand to this most worthy cause of social service in the hospital and by supplying volunteer committees and funds under hospital direction help on the great work of cure and prevention which this institution has pledged itself to pursue?

Hospital Social Service, not then called by that name, started as long ago as 1791,

in the London Hospital in Whitechapel Road. A nurse with three assistants has had charge of the work there for the last twelve or fourteen years. It was taken up in the Massachusetts General in 1905, with one worker at a desk in a corner of a corridor. There are now 22 workers, 24 volunteers, and 15 student volunteers in the wards and three clinics, and the sum of $15,500 was last year expended on salaries, supplies and special purposes. Since then great interest in the subject has been created, and forty or fifty hospitals have established the service. Bellevue Hospital, New York, has now a staff of 35 workers in the wards, two clinics and offices, besides special volunteer committees in eight departments. The Boston Dispensary inaugurated social service in 1909, and the staff now consists of 9 regular workers, 8 student workers and 4 volunteers, $6,000 being the item of expense for this department taken from the General Dispensary account.

A point has been raised as to the advisability of outside philanthropic agencies providing Social Service for hospitals. Dr. Cabot and Mr. Michael Davis endorse in their reports the following views of Miss Wadley, head worker in Bellevue Hospital, N.Y., on this subject:

"In asking financial support, and even in admitting their patients, do not hospitals tacitly guarantee to do everything possible to effect a cure? If then, the medico-social clinic and social workers are positively needed to that end, is it not the hospital's plain duty to establish and maintain that department just as much as it now maintains its drug store and its ward nurses or its X-ray room?

"And this duty is not accomplished when a hospital accepts such a service from some philanthropic organization — the closest co-operation there must be with all such—but to accomplish the best work the impulse and direction must come from within the hospital itself, from its medical staff, if possible, or from its superintendent.

"It is a therapeutic undertaking and needs medical understanding for its direction and execution, and as such should be dignified by being made a department of the institution—otherwise such a service must fail of its highest achievement."

Mr. Davis says: "The intimate relation between the clinical physician and the social worker cannot be developed unless the social service were supervised by the management as an integral part of the administrative system of the institution."

For the following suggestions re Hospital Efficiency and frequent verbal treatment my acknowledgments are due to Mr. Michael M. Davis, Ph.D., Director of the Boston Dispensary (42,000 out-patients in 1912); to Dr. Richard C. Cabot, chairman of the Social Service Department of the Massachusetts General Hospital (40,000 patients in out clinics in 1912); to Dr. C. Morton Smith, of the Boston Dispensary; to Dr. Menass Gregory and Miss Mary Wadley, of the Bellevue and Allied Hospitals of New York.

Hospital cures cannot be effective if patients are turned out of ward beds too soon in order to make room for worse cases than their own, or if they require subsequent treatment which they are not in a position to follow. After-care is needed to prevent John X. from progressing from one hospital ward, where his diagnosis was pneumonia to another ward or hospital with a diagnosis of tuberculosis, all for the want of an overcoat, perhaps, when he left the ward in the very early stages of convalescence. If the social worker is not at hand to help James S., surgical case, discharged as improved but needing dressings, what is to become of him, living alone, unable to work, with room rent overdue? Even if he were able to work, what employment would permit of his taking practically three half days a week to wait sometimes two hours for his turn in a crowded clinic? Here we have a vagrant in the making unless he has the proper nourishment to build him up and means are found to house him and let him take his treatment. Half measures are sheer waste and a case should be seen through to a practical conclusion. Each disease and each individual requires different social as well as medical treatment, and kindly common sense must supplement the doctor's orders. Cases of tuberculosis, perhaps, need to be placed in institutions or under class treatment. They may require home nursing or mountain air, and the patient or family may need to be supported during the time of treat-

ment. Precautions must often be taken against contagion — new cases are frequently found during visits to the home and investigation of conditions there. Help may be needed in finding or changing work for cases of discharged tuberculosis, typhoid, alcoholism, heart disease, industrial diseases, chronic joints, etc.; and the general work of instruction in hygiene of the person and home has always to be pressed by a social worker in order to supplement the work of the doctor in the ward or clinic. Here we have poor William M., ill for two years with abscess and subsequent amputation of the leg. He needs strengthening food and, later, a $100 wooden leg to enable him to fill the position that is waiting for him. Little Jane F. needs glasses or a brace—the family are too poor or ignorant to realize the importance of this. The social worker is successful in educating them, and Jane becomes a valuable working member of society instead of a half-blind discouraged woman or cripple.

Similar service may be rendered to cases in the outdoor clinics of hospitals or dispensaries. In the three cities of Boston, New York and Chicago, the out-patient departments and reputable dispensaries are providing for fully 2,500,000 people (45 per cent. of the population of Chicago and in Boston and New York 1-3) and are expending annually at least $1,500,000. In the country as a whole, millions of dollars are thus spent. Practically nothing has been done, however, to estimate achievements in relation to expense —to compare results with the cost. An out-patient clinic diminishes its efficiency and wastes a large part of its time and money in examining patients who never come back for treatment. Thousands of dispensaries now treating disease are still content to assume that if the patient does not come back after the first visit he is probably cured.

As Dr. Cabot, of the Massachusetts General Hospital says: "This is like supposing that a school boy who never comes back after the opening day of school is staying away because he is cured of all ignorance and possessed of all knowledge." The frequency and regularity of patients' return are undoubtedly affected by the length of time they have to wait; the pleasantness or curtness with which they are treated by the employees of the institution; the clinical routine, the amount of privacy during examination, the number of personal questions asked, and the tact and skill with which such information is sought. Even objects of charity are human beings. Mr. Michael M. Davis, Director of the Boston Dispensary, says in this connection: "If we would realize our ideal of treating not only diseases but men, women, and children, one of the practical things to do would be to see that the rules and general routine of out-patient clinics are adapted to patients as well as to administrative convenience. The particular blindness of a medical institution is to see diseases instead of persons — a series of more or less abnormal, and therefore interesting limbs, eyes, livers and hearts incidentally connected with human beings. We need to have the eye that sees people as well as disease. The patient must be looked upon as a human being, a member of society, and results are to be judged by the improvement produced in his health, his working and living efficiency as a member of a family." In a study of clinical efficiency last year in the children's clinic of the Massachusetts General Dr. Cabot found "that out of 779 patients 57 per cent. of miscellaneous cases had only one visit, 50 per cent. of children with bronchitis never came back, 45 per cent. with chorea made only one visit, and so on through a list of 7 other diseases. Many of these children were doubtless cured, but only a second visit can enable us to be sure of this. They may have died, they or their parents may be too indifferent, too busy, or too ignorant to carry out the treatment, or they may have gone to other hospitals or private doctors. Without a home visit or a second visit to the clinic it is impossible to be sure that the bronchitis has not turned out to be tuberculosis, that the choreic child has been kept sufficiently quiet without making it neurasthenic."

Besides curing acute illness, training nurses, advancing scientific research and teaching medical students, hospital efficiency must now include the meeting of the problems of after care, remedying home conditions which cause disease, instructing patients in hygiene and educating the pub-

lic to co-operation with physicians. This huge wheel of hospital efficiency is kept moving onward by the stream of public benevolence which supports the hospitals and if any of the spokes or paddles are missing, the energy of the stream is wasted.

The social worker's task in ward and clinic is to fill up the holes in medical work and to make that work tell permanently. She has to meet the problems of patients' lives which, running alongside their physical condition, affect powerfully the continuity and practicability of adequate medical treatment. The follow up care given by the social worker is the most important step in assisting in carrying out treatment and in seeing that patients return to get treatment. The physician has, as a rule, neither the training nor the time to grapple with the conditions of poverty, industry and personality which lie behind a large proportion of the diseases of patients. Unless they are dealt with, however, neither patient nor physician can expect to get satisfactory results, and there is a good reason why the patient does not come back. The pressing medical work of diagnosis, teaching and treatment, demands the whole time of the doctor, and yet, perhaps, because of ignorance, or home conditions inimical to the health of the patient, the cure will be only temporary, and the expense to the hospital, the work of the doctor and the burden on the charitable community will increase with each recurrence of illness, while the suffering of the patient is prolonged and the country loses a healthy and profitable citizen. And so, while recognizing the fact that the cure of disease is a public necessity, it has been borne in upon hospital authorities and doctors that the prevention of disease is not only a public economy and benefaction, but an economy which closely concerns their own institution—and that the responsibility of a modern hospital includes social service as well as medical — the after care of patients in their homes to prevent relapse as well as cures in the wards or clinics.

Dr. Cabot says of the Massachusetts General Social Service "not until this year (1912) have workers been put in the clinics. That means that the workers had to take what cases were sent them, the medical men had to make the social diagnosis among the 40,000 sick people who visit the clinics annually as well as teach the students, diagnose cases, and advise treatment. Now the social worker is in three clinics where she can see all the pa ents and can select those most in need of what she can give. Furthermore, she can limit her intake according to her powers and put her strength and knowledge where it will do most good." He adds, "Some of the hospitals which followed our lead in establishing social work improved on us, for they put social workers in the clinics from the start. Bellevue Hospital, in New York, did this in 1906, and the Boston Dispensary in 1909. We have learned from them and are now following their lead in method as they first followed ours in conception." Mr. Davis, of the Boston Dispensary, says: "Social workers must be placed in the clinics and in the hospital wards so that they can come into first-hand contact with the doctor and patient together. Nurses and social workers must pull together, and, when not combined in the same individual the problem of adjusting their functions in the clinic is, and will be for some time, a delicate one."

This brings us again to the question of the worker herself. Dr. Menass Gregory, of the Psychopathic division of Bellevue Hospital (12,000 ward admissions and 4,200 out-patients in this one division in 1912), speaks of the worker in these words: "A hospital social worker, in addition to enthusiasm, broad sympathy, optimism, energy, tact and resourcefulness — qualities of prime importance for the work — should possess some training in physiology, hygiene and therapeutics, some insight into normal and abnormal psychology as well as some knowledge in social and domestic science. A social worker should not be selected merely because she has had the training of a nurse, but if she have the essential qualities and native ability needful for the social worker her training as a nurse will greatly enhance her usefulness."

FEEBLE MINDED AND THE PUBLIC SCHOOLS

By CHAS. G. FRASER, Toronto

WHAT a complicated institution modern society is. How different it is from the time when there was only one individual of the human race, and he the master of the whole animal and vegetable creation. He had to consider only the interests of himself; but even then the consideration of that problem was more complicated than it would appear at first glance. He had to care for his own welfare—both immediate and for time to come. Present gratification might entail future results which would make the present pleasure dearly bought indeed. Modern civilization has a much more complicated problem than that.

For some days, we have been considering the problem of the feeble-minded in its various aspects. We have considered the personal conditions of these unfortunates, who in the battle of life have not the mental stamina which will enable them to meet the temptations and storms of life. We have had a visual demonstration of the conditions with which they surround themselves when they are compelled to provide the necessaries of life, when the cost of living is so high, and their earning capacity so low. They are of necessity compelled to resort to the most pitiable shift to meet the daily calls, or to provide the most ordinary comforts for their so-called homes. We have looked at the moral aspect of the problem of those people who have not been supplied with the strong monitor which emphasizes the right and the wrong of life, and who have not been restrained by the constant example and admonition of those who have that keen moral conscience which impresses the ultimate disaster of a life of abandon, which means a life of "don't care."

The whole problem touches our heart, and emphasizes the thought that we are the keeper of our feeble-minded brothers and sisters. In fact, we are in danger of giving this thought such an emphasis as to neglect the other horn of the dilemma—that we are also the keeper of our brothers and sisters who are not feeble-minded. While we are our brother's keeper, we are also to take care of ourselves. We are to love our neighbors as ourselves, but that does not imply our own suicide.

The work we have to do, to keep these two classes of brothers and sisters, is quite different; and in a land so richly endowed with natural resources of all kinds, as ours necessary provision. Each human soul has some value. Each individual is some better than a mere beast, though it does not always appear. Each has some qualities and talents which, if developed and utilized, would add to the welfare of the race; but each talent calls for a different training and each child requires a different course of treatment.

This is the problem we meet in the public school, and to understand it we must look at the plan on which the public school is organized. Modern society is an organization in which each person prepares himself as a specialist for some part of the work of the community, endeavors to acquaint himself with all the bearings of his special work, and applies himself to acquire a skill in its performance.

The training of children, fortunately, is one of the occupations that is required in every community; and its importance is becoming more generally recognized. Noticing that there is a regular development in the ordinary child-life and the child-mind, and that there is a similarity between the average children of a certain age, we have resorted to a plan whereby those of similar attainments and development are grouped, and trained together. They are brought into contact with constituted authority. They are taught the art of reading and writing so that they may enter into the possession of the wealth and wisdom of the ages; and in the acquiring of certain facts, and learning certain relations which exist between things, their mental capacity is developed and they are lead along the paths of childhood, through the period of youth up to manhood and womanhood.

While average boys and girls of the same age are similar in attainment and powers, we must not lose sight of the fact that each has a personality—an individuality which makes him different from all other children. We take advantage of the similarities in carrying on the work, but we must pay attention to the individualities, if we

would have these children attain the stature—mental, moral and physical—of which he is capable, so that the full wealth of his individuality may enrich the community and the state.

Class-work is an advantage to the individual. It adds a stimulus to his activities, and gives a breadth to his sympathies and vision; but this feature of class-work must be used in moderation. If the class becomes too large the individuality must suffer and finally disappear entirely; or the class may be made to suffer while the individuality of a few is being attended to; that is the condition which is known by the name of favoritism, and must exist to a greater or less extent in all classes. Those who are the most attractive either because they are good or bad, or very good or very bad, must ever receive the most attention.

This is the case that exists in any schoolroom where there is a mental defective. The cry "retardation," that modern shibboleth which is being urged upon the public notice, is used as a cat-o'-nine-tails to lash the teacher to stronger endeavor. We see tables compiled which compare age and grade, and in indignant tones they demand an explanation. Too often that demand is made where there is no one to give the explanation, and the grunt of satisfaction of the questioner leaves the impression that there is but one explanation—the teacher is not efficient.

The teacher herself, seeing the disparity between the grade and the age, feels that perhaps she is a little to blame, and endeavors by special attention to make up for the mental deficiency. She gives the particular child an attention which is away out of all reason; and when she fails, she devotes herself, with greater effort, to the task in hand.

But the very reason that the child has not succeeded, prevents his success now. He has not the stamina to apply himself so as to master the work. Nor has he the ability to do it. She is trying to force a round peg into a square hole, or a square peg into a round hole, and we all know the result. What effort is required to teach a duck to swim? Put twenty times that effort on teaching chickens to swim and the result will impress a similar folly to that which is exhibited by the average teacher, who tries to lead the feeble-minded along the flowery paths of learning at the same rate as the normal child.

But that is not all. For some reason the lower animal instincts are present, and the little fellow is constantly at work bothering those around him. He seems to take a delight in doing something wrong—in doing everything that is wrong—and for this kind of work he is proverbially resourceful. He has no keen sense of the moral worth of an act. A lie, to him, is simply a lie, and nothing more. With animal instincts dominant, he gives expression to animal thoughts, and performs animal, if not beastly acts, to the moral injury of those who are compelled to see him, with a special injury to the children of tender years of the same class; and as a result, the patient, pains-taking, overburdened, teacher has a break-down and becomes a temporary or a permanent wreck.

These feeble-minded children should not be in school at all. (1) They require an attention, and a training, which is suited to their special capacity. (2) They cannot keep pace with the average child. (3) They demand more than their share of time and attention, to the disadvantage of the other members of the class. (4) They are a moral menace to the normal child, and they are a burden to the teacher; and all these disadvantages exist without any compensation, so that when we consider the rights of the child himself, as well as the rights of the other children, when we think of the energy of the teacher, the welfare of the community and the interests of the state. All these considerations impress and emphasize our present folly, and demand that we should segregate these unfortunates, early in life, placing them in surroundings which will be suitable to their capacities, where they can earn a livelihood for themselves, and be treated in a way that will prevent them from propagating their species.

To bring about these conditions, we have prepared a form of petition calling the attention of the Government to the conditions and asking their action to make the necessary provisions. Let no one leave this room to-night without signing his name to one of those forms, and perhaps taking charge of a form to be placed before the school, the church, or the society, to which he belongs.

WOMAN'S WORK BEFORE MARRIAGE*

By JOHN MARTIN

The second in a series of articles on The Four Ages of Woman, in which Mr. Martin sets forth a "programme of humanism" in opposition to what he regards as socially destructive phases of the feminist movement.

THE first period in woman's working life is the shortest. Its length varies according to social grades. The wage-earning working girl leaves school between fourteen and eighteen, usually by sixteen, and hopes to marry before she is twenty-five. Physiologically, socially and morally it is advantageous if she marry by twenty-three.

The college woman graduates at from twenty-two to twenty-five; but she marries several years later than her less privileged sister. Though entirely her misfortune, that is not entirely her own fault. Men in the social grades from which her mate naturally comes delay marriage until their prolonged business preparation and novitiate are complete.

For all grades of women then there may be a period of six to nine years between finishing school and starting a home. What shall they do with it? Idle philandering is not possible for the working woman nor desirable for the college woman. In anticipation of their coming high duties the best occupation for them would be connected with children and home-making. A mechanic who expected to be a carpenter for the twenty years of his prime would not try stenography nor selling ribbons for five or six years. A college man who purposed being an engineer would not put in five or six years in a law office. But women who anticipate being mothers and home-makers during their prime are urged by feminism to practice cotton-spinning or ribbon-selling or law—anything, no matter how remote from their life's work, that offers wages.

A conscious adaptation of work during this interlude to work in after life, an adaptation which humanism would welcome will come only when the adolescent girls and their mothers exhibit a better appreciation of the significance and difficulty and glory of the home queen's duties.

"Though the average girl sees in marriage a step toward freedom," witness the best informed observers, yet "while in her romancing the girl naturally centres her thoughts about the management of a home, she does not look upon house-keeping as a trade to be learned, but expects to blossom into domestic competence after the marriage ceremony. Some few girls have a forehanded interest in cooking, a still smaller number manifest a workmanlike zest for home-making; hardly any think to prepare themselves for motherhood. From the very start the interest of the girl is divided between present wage-earning and future housekeeping." (Young Working Girls, by Woods and Kennedy, page 162.)

Since the normal woman will pursue a money-making occupation only for a few years, she cannot profitably devote several years to special preparation for it, unless it also prepares her for home-making and motherhood. Occupations like law and preaching, which require a lustrum to a decade of special study, and which yield an equipment not serviceable to the mother, presuppose either the abandonment of the profession before it can return the expenses of preparation, or the great renunciation of motherhood by the woman who undertakes them. Medicine and teaching have value in the home which compensates for the long novitiate.

Machine industry, the destiny of most industrialized women, requires but short time for learning. Speed, the element most sought by employers, is gained while wages are being earned. It is for this reason that factory work has become so widely available. The feminization of industry follows upon its simplification. The lighter and more mechanical the process the greater the certainty that it will be done by women.

So women can and do and should regard industrial employment as a stop-gap in a

*The Survey, March 4, 1916.

life's work, an interlude between the subjection of school and the independence of marriage. They do not view their occupation as men do. They have not the same stimulus to master a complicated industry, not the same interest in laying foundations wide and deep on which they may build a lucrative career in later life. They consequently combine less readily than men in trade organizations, endure less willingly the sacrifice necessary to perfect a defence which will serve them a decade later. They must have immediate return.

Both in America and in England the average wages of women are but half the average wages of men in private employment; and in public employment, with rare exceptions, women are paid less than men. Feminism laments this inequality and proposes to cure it by "pay for position" or "equal pay for equal work."

"Equal pay for equal work" assumes that the work can be measured and the pay proportioned to the amount done. In cotton-spinning, coal-mining, garment-making, printing and many other manual occupations, such measurement can be made, and piece rates are set under which the wages received are exactly proportioned to the amount accomplished.

When men hold such industries and women threaten to invade them, the men often insist enthusiastically on "equal pay for equal work." Not, however, sad to tell, because in their gallantry they wish to see women put on an industrial equality with themselves; but because they realize that if they compel the employer to pay women at the same rate as men only an odd woman here and there will be employed at all. The American Telegraphers' Union, for example, upholds this principle doggedly, with the consequence that women are not employed as telegraphers, even in those positions which in England are successfully filled by women, and though in the analogous work of telephone operating women are supreme.

In cases where women are engaged in considerable numbers at the same piecework rates as men, as in the English cotton mills, the output of the women is less than the output of the men, and the small minority of men usually work on the heavier class of looms. The women's remuneration is therefore less. Rarely, indeed, do women anywhere work at the same processes as men. Almost always, even when men and women work under the same roof, they work at different processes. When the process demands muscular strength and physical endurance it is allotted to men; when it demands light-fingered dexterity, nimbleness and routine patience, it is allotted to women.

Temporarily, as in woolen mills, the lowest grade of immigrant males may work at the same processes as women, because the men will accept the women's rate of pay. But a stratification soon begins and before long, men and women are working in different rooms at different processes.

Only in odd cases, then, is the cry "equal pay for equal work" relevant to any situation existing among female wage-earners, the millions of privates in the army of women engaged in gainful occupations.

But in public employment a different rule prevails. Remuneration is not fixed by economic competition.

Permanent positions in the public service are of two orders: (1) Positions exempt from Civil Service regulations, and (2) positions in the classified service, those under Civil Service rules.

I.

Public positions exempt from Civil Service conditions are filled by appointment and usually, in part, even where impeccable reformers hold the offices, as a reward for political services. To these positions, "pay for position" already applies. If a senator appoints his daughter as his private secretary, he is allowed exactly the same salary for her as he would if he appointed his nephew or his son. A woman commissioner of charities is paid as much as a man commissioner of charities; a woman superintendent of schools as a man superintendent of schools. Discrimination is shown in the proportion of men and women appointed.

Probably in this group of positions more women would be discovered to be fit for the job if women voted; especially to the lower places in counties and states where Civil Service rules are not in force and positions go by political favor, a greater number of women, if they had votes, could establish a claim as district workers.

But equality of opportunity for appointment would not ensure equality of service between men and women. When appointment is made as a reward for political activity the incumbent, whether man or woman is frequently, alas, unfitted for the post. Though in special cases it would be impossible for any human being to be less competent than the male incumbent of political office, yet, on the average, the service of women politicians will be still less efficient than the service of men politicians, because, on the average, women are less fitted for industrial work than men, as is shown by their failure in private employment to command the same salaries as men. For the protection of the public interest pay should be proportioned to service, not fixed for one grade of service and paid for a lower grade of service, even if the title of the holder of the office remains the same.

II.

Under Civil Service rules positions are filled by competitive examination, the salary being determined before the examination is held. If the salary schedule, like nature, distinguishes between men and women, as most schedules for school teachers have done, then the women may procure elimination of the sex distinction by legislation or by pressure upon the administrative body concerned, the board of education or the city government, as did the women teachers of New York. In that case the outcome will be the composition of two forces—the public official's always sensitive desire to be personally popular, and his fear of driving the taxpayer to a revolt which would throw the official himself into the penurious shades of private life. Political conditions, not economic necessity, will control.

Sex being eliminated from Civil Service salary schedules, on what principles shall the amount of the salary be set?

Two factors which must be considered —the supply of competent candidates and the living wage—the doctrine of "equal pay for men and women" would abrogate.

As is demonstrated by the outstanding fact that men's wages average double women's wages in private employment, the supply of women able and willing to fill industrial positions open to women is greater than the supply of men. Men willing to be teachers are much rarer than women of the same competence; men typists are not so easily found as women typists of like order of skill. Men cotton-spinners willing to accept low wages are not as common as women cotton-spinners. Only by ignoring this difference of supply and demand, by shutting eyes to the fact that a man in the open market has a greater scarcity value than a woman, can "pay for position" be established.

More important, however, is the principle of the living wage. Democratic governments are besought by reformers and humane taxpayers to be model employers, not to pay the lowest wage for which service can possibly be bought, but generously to set a minimum of a living wage for every occupation. That appeal each year is more and more widely recognized to be well based. However, what constitutes a living wage? When sex is considered in framing salary schedules, a man's living wage means a family's living wage; a woman's living wage, an individual wage.

When sex is eliminated from consideration, shall a woman's living wage also be made a family wage, or a man's wage be reduced below a family wage? "Make the woman's wage equal to the men's," orders feminism, "if you must reduce the man's, so much the worse for him; but it is not my concern. Raise the woman's until it meets the man's, and I shall be content." These were the orders of the New York feminists regarding teachers' salaries—orders which the Board of Education and the legislature faithfully executed.

Trade unionism has argued for the family wage as the man's wage. When it presents to arbitration courts its plea for higher wages to follow the increased cost of living, as it did in the several cases of the railroad engineers and the railroad conductors and brakemen, it consistently argues from the cost of family living. Were its case founded on the cost of living for the individual employe, it would hopelessly crumble. Therein trade unionism is inherently antagonistic to feminism, for "equal pay for men and women" cannot conceivably mean a family wage for men and for women throughout industry.

In private employment the family wage for men may be abrogated; but a family wage for women is economically impossible. Equality must mean degradation of men's wages as it did in the New York schools.

In Australia, where the state determines "fair and reasonable" wages for men as well as women, the rule is established that a man's minimum shall be a family wage, while the woman's minimum is an individual wage. Mr. Justice Higgins, president of the Commonwealth Conciliation and Arbitration Court of Australia, describing the methods in which that court has fixed wages, says:

"The test of a fair and reasonable standard is a wage sufficient for the normal needs of the average employe living in a civilized community. The essential needs are food, shelter and clothing. A full and generous allowance for these should be made to the average man who may be assumed to support an average family consisting of himself, his wife and three dependent children."

But, "A woman is not, like a man, under general obligation for the support of her family." Therefore,

"Where women are continually employed in preference to men, another standard should fix the general rate of wages. This should be the cost of living for the individual girl, living away from home with the responsibility of supporting herself. . . . Of course, many girls have family responsibilities; but an employer cannot be told to pay a particular employe higher wages because she happens to have parents dependent on her, and more than he can be allowed to pay her less because she has a legacy from her grandparents or because she lodges free with her parents and merely wants some money for dress." (The Survey, August 1st, 1914.)

Plainly there is antagonism between the doctrine of equal pay for men and women and the doctrine of the minimum wage. If the demand for equal pay be conceded, the legal minimum wage for men must be abandoned; as must also the legal obligation upon the man to support the wife and children—a high price to pay for a doubtful advantage to groups of women.

Recognizing these inescapable conditions, humanism would encourage young women to regard industrial work as only a temporary expedient for filling their time, with more or less profit, until they marry. No employment would be countenanced which in any way would reduce the young woman's fitness for motherhood, and it would advise her to select an employment which would prepare her for her real life's work. For instance, domestic service in a good home, even at low wages, under an intelligent sympathetic woman who would encourage the servant in "keeping company," would be more advantageous than making paper boxes or artificial flowers, dipping matches, tending a spinning machine, or wrapping parcels under a driving man superintendent, in a store or factory. And, in fact, the money return for the domestic service would be higher.

Therefore, a vocational bureau for guiding girls into an occupation, whether under private philanthropy or in connection with public schools, if under the control of feminist ideas, will hunt for jobs preferably outside of homes and alien to domestic life; if under control of humanist ideas will seek first to fill every procurable opening inside homes, or, like nursing, preparatory for domestic life.

Under humanism, the regiments of bright young women engaged at a salary in social and philanthropic institutions would be warned when they were engaged that they would not be retained beyond a few years and must, on no account, regard the employment as a life's career.

The director of one eugenic association which annually engages a few of the most brilliant graduates of the women's colleges says to them: "I will employ you for three years, and no longer, because by the end of that time I expect you will have secured a permanent engagement to become some good man's wife and continue your eugenic work in a more fruitful way."

Teachers' salary schedules would in a similar spirit be revised. In large cities, like New York, the salaries are arranged as if there were a deliberate purpose to present the maximum temptation to spinsterhood. For sixteen years and more after starting to teach the woman's salary is annually increased almost automatically, and promotion to the highest positions is the reward reserved to those who eschew motherhood.

Humanism would organize school systems on the presumption that it desired every teacher to marry before thirty and approved her return to the service, for ten to fifteen years, after forty-five, when her children were grown up. It would, therefore, make the first appointment of a woman fresh from training school, for a maximum of five to ten years, and would reserve the highest teaching positions available to women for those women who had completed the richest of a woman's experiences, the rearing of a family. Meantime, it would subsidize her for the teaching of her own young children at home, to an amount fully equal to the present cost of teaching them in school.

Through thoughtlessness and through blindness to the fatal racial consequences, schools and colleges, philanthropic societies and the best employers of labor are engaged unconsciously in a conspiracy against matrimony. They say in effect to the most competent young women: "If you renounce marriage and continue in this salary earning work we will raise your earnings periodically and promote you to positions of greater honor and responsibility."

Such conspiracy is treason to society more flagrant far than any combination in restraint of trade. By breaking up that conspiracy, humanism would reduce the problem of the married women in industry, which must next be considered.

[In the next instalment Mr. Martin will discuss the question: "Shall a woman resign her wage-earning position when she marries?"]

THE PHYSICIAN IN INDUSTRY

By MANGUS W. ALEXANDER

IN the early history of medical work in industry, the regular employment of a physician was usually considered an evidence of a largely benevolent attitude on the part of the employer. Whether or not this assumption was true, the results showed that the work of the physician in industry proved beneficial to the employer as well as to the employee, by protecting both against undue expense arising out of injury and sickness and by promoting a better mutual relationship. The results also proved that medical supervision of employes increased their efficiency, and that prompt medical and surgical treatment of injured and sick employees prolonged their lives and the period of their industrial usefulness. As these advantages became known among employers, medical supervision of employees was introduced into many plants, particularly into establishments where large numbers of workmen were employed.

The great value of the physician in industry became even more generally realized when workmen's compensation laws went into effect, which compelled the employer to shoulder the expense of injuries to employees regardless of the fault of either party. These laws forced the employer, in self defence, not only to provide adequate medical and surgical treatment for employees injured in his establishment, but also to exert all reasonable effort for the prevention of future accidental injuries and for the elimination of working conditions that might prove harmful to the health of his employees. Experience, however, had shown that physique, temperament and general physical condition of employees affected to a large extent their liability to sickness or injury. Some men could safely do work that constantly required considerable physical effort, while the same work would cause discomfort and strain to other apparently strong men. Employees with defective vision would suffer headache while doing work that required close application of their eyesight, while others with normal vision would naturally have no such trouble when similarly engaged. Contact with certain odors or liquids used in manufacturing processes would cause skin irritation or other disturbances to one person, while hundreds of others working under exactly the same conditions would be entirely unaffected.

These experiences naturally led the employer toward a study of the physical condition of his employees, in order to direct each of them into that kind of employment for which he would seem best suited by virtue of his physical fitness as well as his experience and skill; and vice versa, to divert him from an employment that might prove injurious to his health and safety. In order to pursue this course intelligently, physical examination of all prospective employees and periodical reexamination of all persons already employed became necessary. It is obvious that only a competent physician should be assigned to this task.

Aside from looking after the health of individual employees, the physician in industry also renders a valuable service by bringing to light those general conditions of employment that may adversely affect the health and comfort of all workmen in common. Many of these conditions would otherwise remain concealed and unremedied because their ill effects are of such gradual development that the lay executive or employee might not be able to detect their presence nor locate their source. By his co-operation with the employer and foremen in securing wholesome ventilation and proper lighting conditions, and by inducing employees, by personal advice or through suitable literature, to adopt healthful habits in the shop and home, the physician brings into play simple, far-reaching measures that tend to raise the health and therefore the efficiency standard of the entire working force.

The Training of First-aid Men.

The physician also finds specific functions to perform, such as the training of an adequate number of persons in each employment, so that they can themselves as laymen effectively treat slight wounds that do not demand a physician's service, or give temporary assistance in cases of serious injuries that need emergency attention pending a physician's arrival. The presence of such a body of trained first-aid men is so much the more important when the industrial establishment is located at a considerable distance from the physician's office or dispensary, or when injuries occur when a physician is not immediately available.

With these many advantages in mind it is obvious that the physician has come into industry to stay. In a large plant he becomes part of the organization and devotes his entire time and effort to the welfare of its employees, while in smaller plants or in those where the work is practically free from hazard, he spends only a part of the day in the medical care of employees, or he combines a number of such plants under his medical supervision. Apart from the medical aspect, however, enlightened employers are beginning to see quite clearly the value of a physician as a staff member. They have learned to appreciate that his peculiar relationship to employees as a friendly medical advisor enables him to exert a wholesome influence upon their mental attitude as well as upon their physical welfare. It should therefore not be surprising to find in future physicians regularly attached to the organization of even small plants, where the medical supervision of employees alone would not be a task large enough to warrant the full time employment of a medical expert, but where his spare time may be used effectively in assisting the management in the general supervision of employees.

Special Tasks and Problems.

The physician in industrial practice encounters a great many tasks and problems that do not arise ordinarily in private practice. He often finds himself dealing with a great number of people whose needs must be met promptly, effectively and with a minimum expenditure of time. Many of these are unfamiliar with the English language and are unable to make their needs and wishes understood or to understand the inquiries and directions of the physician who speaks English only; others are mentally backward and difficult to deal with on that account. Some are unclean and careless in their personal habits, thereby causing their wounds or ailments to improve only very slowly even under the best of care, while others have a generally antagonistic attitude. Some are even dishonest and try to conceal or falsify the real cause of an injury; they would rather feign inability to work and secure part pay while loafing, than perform honest work and gain full wages.

Moreover, there are those who themselves believe or by some doctors are led to believe, that they are seriously injured and incapacitated for work when they are not. Yet the physician in industry must patiently and persistently cope with all these conditions in his endeavor to cure these people of their physical ailments and to disabuse them of their mental illusions.

The question of where the physician in industry should terminate his care of injured or sick employees and at what point an employee's private physician should assume such responsibility, is another problem that must be solved in a satisfactory way. What duties to delegate or not to delegate to the nurse employed in the establishment under his supervision; what instructions to give and what materials to furnish to laymen authoried to render first aid or emergency treatment to injured employees throughout the plant; how best to render some industrial operations free from the hazard of occupational disease, or how to protect workmen against such hazards if they cannot be eliminated, are questions that he is called on to answer in an intelligent and practical manner.

In the solution of these and similar problems the physician in industry often finds himself in a quandary. Previous training and experience had made no specific provision for their solution; in fact, many of these problems have but recently become recognized. In most cases the physician in industry has been obliged to find an answer to each problem practically alone and as best he could. Sometimes he has hit on a method that was only partially satisfactory; sometimes he has achieved results that were all that could be desired, while at other times he has failed in his aim. Occasionally, through a comparison of conditions and an interchange of experiences, physicians connected with industrial enterprises would reach common conclusions that would point to simple and practical remedies. The value of such informal conferences naturally led to a desire for a more systematic interchange of ideas extended over a larger group of physicians dealing with medical problems in industry.

The Conference Board of Physicians.

A preliminary meeting of physicians engaged in industrial practice held in New York City on April 4th, 1914, indicated that their varied knowledge and experience could be so combined and harmonized as to afford composite and definite conclusions that would be valuable to themselves and to the industries they represent. It was also felt that the findings could advantageously be made available to all physicians in industry to the end that employers and employees generally might reap benefit therefrom. The concrete outcome of this meeting was the organization of a "Conference Board of Physicians in Industrial Practice," the scope and work of which is embodied in the official declaration that "The Conference Board of Physicians in Industrial Practice is organized for co-operative effort in introducing into industrial establishments the most effective measures for the treatment of injuries or ailments of employees; for promoting sanitary conditions in workshops, and for prevention of industrial diseases."

In launching this movement, the Conference Board on Safety and Sanitation has been a helpful factor, and the two Conference Boards have since been working in a close, harmonious relationship; that of business executives looking for professional advice in safe-guarding the health of employees, and that of physicians offering medical judgment as the result of combined study and experience.

It was thought desirable to bring together at first only a relatively small number of medical officers of corporations, so as to facilitate their work and give their discussions a more intimate character. In order to insure regular attendance at the meetings, only corporations in the eastern section of the country were asked to join the Conference Board through their respective medical officers, but industrial representation was diversified as far as practicable. The physicians now constituting the Board are all men of wide experience in their respective fields, who have gained a thorough understanding of the requirements of industry from the humane viewpoint and of the physical ability

of men and women generally to meet these requirements. They are also familiar with the personal habits and the living and working conditions of people engaged in industry, and are therefore particularly competent to handle medical problems in industry.

Dr. John J. Moorhead, of New York City, the Chief Medical Officer of the Interborough Rapid Transit Company and the New York Railways Company, is chairman of the Conference Board, and M. W. Alexander, of the General Electric Company, West Lynn, Mass., is the executive secretary.

The companies represented by these physicians employ over 250,000 men and women, skilled and unskilled, of many languages and nationalities, and working both indoors and out in greatly diversified occupations.

The Board meets periodically. So far eight meetings have been held and some important results have already been achieved; much other work of far-reaching character is now under consideration. The individual members of the Board are actively co-operating in the prosecution of research work in respect to special problems which can be studied best in the particular industry with which they are connected. The results of individual investigations, however, are referred to the Board for broad consideration and joint action.

Instructions to Laymen for First Aid.

One of the first tasks assumed by the Board was the development of "Instructions to Laymen for First Aid Treatment of Common Injuries and Disorders." It was the intention to issue instructions of such simple character that they could readily be followed by the ordinary man without even an elementary foundation of first-aid knowledge. The instructions agreed upon by the Board are concise and pertinent; they stipulate what the laymen should do, without wasting any words in stating the reasons for so doing. In an emergency treatment, loss of time by reading irrelevant matter may prove of serious consequence. The remedies referred to in the instructions are few, simple and inexpensive and can be administered by laymen without danger of any harm. All medicaments, bandages and other materials needed in carrying out the instructions are readily obtainable in drug stores. The first aid instructions promulgated by the Board have been widely accepted; they have also been reprinted in numerous technical journals in the United States and in other countries.

The Board also co-operated in a very practical way with the Conference Board on Safety and Sanitation in the development of the "N.A.S.O. Standard First Aid Jar," a compact, sanitary and convenient first-aid outfit consisting of a dust-proof glass jar in which first-aid materials are contained in well ordered arrangement. The first-aid instructions are printed on the inside of the glass jar cover and are therefore always at hand when needed. These first-aid jars have been made readily available to employers and are now being used extensively in industrial establishments, in public institutions and private homes.

Physical Examination in Industry.

The next work of importance undertaken by the Board was the determination of the essential requirements of "Physical Examination" in industry generally. This subject was given careful study with a view of arriving at a standard of minimum requirements and records which could be used in connection with practically all employments, or with such additions as the nature of a special employment would necessitate. The conclusions reached were based on extensive observation and experience in industry, through which it had been learned what physical ailments and what degree of such ailments would interfere with the well-being, efficiency, and safety of the employees at work. The Board agreed upon the various defects requiring attention in physical examinations, and the various degrees of such defects, on the basis of which the suitability of an individual for a specific employment can be determined. The Board also standardized a "Physical Examination Record Card" of convenient size and so arranged that a sufficiently clear and comprehensive record can be made with a minimum amount of clerical work. These record cards have already been used in methods of "Artificial Respiration" of

thousands of cases with entire satisfaction.

The Board gave special attention to persons rendered unconscious by electric shock or by asphyxiation from water, smoke or gas. The Board expressed itself unanimously in favor of the manual prone pressure method by persons specially instructed therein, but it also agreed that when mechanical devices for artificial respiration are used they should be used principally as auxiliary means and then only by specially instructed laymen or physicians.

Realizing that all efforts for sanitary conditions in workshops and for clean personal habits of persons while at work would be brought to naught if the persons themselves would not make similar efforts in respect to their homes and their personal habits outside the workshop, the Board decided to prepare a set of "Health Hints" of prophylactic character, written in simple, concise and direct language, so that they can be readily understood by the average person. The Care of the Teeth, the Care of the Eyes, the Healing of Wounds, the Value of Proper Breathing, the Danger of Promiscuous Spitting, the Cause of Headache and of Kidney Trouble; these are some of the subjects on which the Board has prepared statements which are intended to be printed, each on a separate leaflet, for wide distribution among employees generally.

Study of Occupational Diseases.

The Conference Board has also entered into a careful study of diseases peculiar to certain occupations, with a view of learning the most effective treatment of such diseases and the best methods of reducing or entirely eliminating their causes. Some members of the Board who are connected with industrial establishments in which the nature of the work or the materials used are apt to cause such diseases, have become experts by special study and extended experience in this field of medical practice. With their assistance and with the help of other invited experts in this field the Board is proceeding cautiously and painstakingly in the study of "Occupational Diseases," and expects in due time, to arrive at and publish definite conclusions.

Another important phase of the work of the Board is the exchange of specific experiences by the members as they encounter special situations in industry, or as they come in practical contact with the administration of workmen's compensation laws. Many of the corporations represented on the Board through their respective medical officers are operating in several states and are therefore subject to more or less widely differing workmen's compensation laws and health regulations. The necessity for uniformity in statutory provisions and in their interpretation has therefore been pertinently brought home to the Board and has convinced it of the desirability and need of a standardized nomenclature and definition of medical terms as they relate to industrial work. The Board realizes that progress along these lines will be slow, but it believes that substantial progress can be made by thorough investigation along broad lines and by close application to the task.

The Conference Board of Physicians in Industrial Practice is unique in character and in method of work. It is a voluntary association of a small number of men engaged in the same field of professional work, who meet in periodic conferences of the most informal character, unfettered by any restricting rules and regulations or by any obligation to abide in their individual work by the conclusions of the Board. Yet the common purpose which brings these physicians together and the absence of such restrictive regulations, has resulted in a most helpful co-operative effort. The work of the Board members, while strictly governed by professional ethics and scientific principles, is given a most pronounced practical aspect from the fact that these physicians in industry have acquired by the nature of their work an industrial viewpoint and understanding that establishes the proper balance between what should be abstractly striven for and what can be concretely accomplished under actual working conditions.

STATE HEALTH ORGANIZATION*

By CHAS. V. CHAPIN, M.D., Providence, R.I.

The purpose of this paper is to discuss the general principles which are likely to be most useful in planning legislation, or mapping the sphere of the state's share in the preservation of the public health.

The first essential for efficient state health organization is a strong executive. A board, or committee, is almost never successful in executive work. What is needed is one person clothed with full executive power. It makes no difference whether he is called commissioner, health officer or director. He alone should appoint subordinates, control the finances and define policies. His term of service should be at the pleasure of the appointing power. His salary should be adequate. He should devote his entire time to the service. He should be trained in public health work.

The difficulty is to get such a man. The greatest hindrance is politics. How to eliminate politics is the great problem. In some states at present it seems to be hopeless. The citizens seem to be perfectly willing that their executives should work for the party instead of the state. Most persons agree, however, that the degree of political prostitution depends to some extent on the form of organization.

One plan to avoid political entanglements which has been tried in several states, is to give the medical societies a share in the management of the health department. It is dangerous and unwise to give to non-representative bodies a share in the Government. Moreover, medical men as a body are not skilled in preventive medicine. Only great benefits, not to be otherwise secured, would warrant such a delegation of authority. It must be remembered that medical politics and medical log rolling are at times as pernicious as any other form of partisanship. There are four states in which the state medical society, or societies, control the department, or a majority of the board, and one in which the society elects a minority of the board. Most excellent work has been done in some of these states, but equally good work has been done under other forms of organization in states elects a minority of the board. Most excellent work has been done in some of these states, but equally good work has been done under other forms of organization in states in which other conditions are no more favorable.

Most reformers think that much can be accomplished by fixing responsibility. One man, they say, should make appointments. Hence the tendency is to provide that the Governor shall appoint the heads of all departments. At present the Governor appoints the executive of the state health department in less than a third of the states. In a number of these the department is overturned every time there is a new Governor, and the public funds are wasted by an inefficient department. On the other hand, in many states which have attained the highest rank in sanitary affairs, and in many in which the executive has to his credit long years of efficient service, he obtains his position in another way.

In every state in the Union it has, for one reason or another, been thought desirable to have a board of health, and in all but one it is prescribed by law. The older plan for the selection of a state health officer is by election by this board. This prevails, practically, in thirty states. This seems to me to be at present by far the best way to secure and keep an efficient executive, provided the board is constituted in such a way that its membership is likely to change slowly, and provided it has no other executive power. It will probably be objected that it is illogical to give the board of health this one executive duty of such very great importance and to grant it no other. So it is; but some of the most useful governmental institutions are illogical and the result of compromise. A continuous board seems, in the light of experience, to be less likely to inject politics into its selection than is the Governor, and it is still less likely to do so if it has no other direct

*Reprinted from Journal A. M. A., March 4, 1916.

executive authority. Moreover, if the board has no direct authority in the selection of employees and in the expenditure of funds, the Governor is less likely to use appointments on the board to reward political workers who are looking for a place with something in it. Of course the selection of the state health officer by the board will not certainly save the office from politics, but it will render it far less likely to become a part of the spoils system. Another safeguard is to provide that the board shall not elect one of its own members as executive officer. This not only tends to eliminate politics, but it also prevents the development of jealousies and friction within the board.

The executive officer should be skilled in sanitary science and have had administrative experience, and it is perhaps well enough so to provide by statute; but this of itself will not secure a good choice. It is important that the selection should not be confined to residents of the state as it is now in some states by statute and, in one at least, by the constitution. Generally it is unwise to prescribe qualifications, because these, if specific, are rarely helpful, and conditions may arise under which they hamper.

After the selection of the executive comes the important matter of rule making. Here the question of constitutionality arises, and lawyers and courts are not in entire agreement. Decisions vary in different states, and local conditions must be considered before framing any legislation. While in some states the courts have sustained a very broad grant of legislative power to the state department of health, in others the authority to do this has been denied. It is generally admitted that it is unwise, if not unconstitutional, to confer on a single commissioner legislative authority, or even much rule making power. This, then is an important reason for the establishment of a board of health, or, as it is called in its newer form, a public health council. Many of our leading health officials believe that rule making and advising should be its sole functions. I think that no harm and much good will come from having it choose the health commissioner. That such a board may be of great value in advising the commissioner and by supporting him throughout the state is shown by experience, but this will depend on the character of the board and can scarcely be provided for by statute.

Such a board may well consist of seven, or six if the commissioner is to be a member, one to be appointed each year. The exact number is not important, but the complexion of the board should not be easily changed. It does not seem to be important whether the commissioner is, or is not, a member. Ex officio members are not usually of much value. It does not seem wise to prescribe qualifications of members. They should be men of character, interested in public health, but not experts. If they are experts they are likely to interfere with the real executive. To appoint an engineer, or an attorney, for the purpose of getting advice free, for which the state ought to pay, is reprehensible. It is unusual for the members to receive compensation, and this seems the wiser plan.

While there is some doubt about the wisdom, and in some states about the constitutionality, of granting to the state board of health practically unlimited power in sanitary legislation, practically all health officials are agreed that there is a large body of administrative rules relating to notification, isolation, disinfection, milk, food, water, sewerage and the like, which it is absurd to expect that the Legislature is competent to enact properly as law. The Legislature has neither the time nor the knowledge, and unless it accepts, without amendment, a code drawn up by experts, the results are likely to be crude and unsatisfactory. The best way is to give to some small body, like the state board of health, this rule-making power, and this board will, in its deliberations, be guided by the expert advice of its executive officer. It is only by means of rules that sufficient flexibility of legislation can be obtained. Delays in the proceedings of the Legislature are often numerous and extended, and statute law cannot be relied on to keep legislation abreast of scientific progress.

Whether the board is to be given full legislative authority by some such phrase as "said board is authorized to adopt a code for the preservation of health," or whether certain subjects, such as those previously mentioned, are to be specified, concerning which it may make rules, depends on the constitutional provisions and the court decisions of the state in which the matter is

under consideration. This rule-making power is regarded as one of the most important functions of the department of health.

If the decision is that broad legislative power cannot be granted to the department, the greatest care should be taken in drawing up the statute which is to specify the subjects on which the board may make administrative rules. As many subjects as possible should be included, and the act should be so worded as to give to the board the greatest possible latitude under the constitution as interpreted by the courts.

The principal functions of the department of health are indicated by the divisions, or bureaus, which are found in the department in the larger states. Sometimes these divisions are provided for in the organic law, especially in the newer enactments. More often they have developed naturally with the gradual growth of the department. It is perhaps well enough to provide for them in the organic law, but if this is done, provision should also be made that the executive of the department may modify, rearrange, add to or subtract from them. It is most unwise to provide rigidly for such matters, for, within a very brief time, functions which now receive little attention may become of the greatest importance. Who knows how soon a special bureau will be needed for cancer, for the venereal diseases, or for circulatory and renal diseases? Who knows how soon local laboratories will be so generally established that the diagnostic work of the state laboratory may safely be neglected?

Functions of the Health Department.

1. The first duty of the department is to secure the complete registration of vital statistics. It is no mere academic expression to say that this is the foundation of all public health work. Vital statistics are of the utmost practical importance. How is it possible to know how much attention to give to tuberculosis, how much to typhoid fever, how much to the distribution of antitoxin for diphtheria, unless it is known how prevalent these diseases are? How can we be certain what towns have a safe water supply unless we know how many people die of typhoid fever? Statistics alone can show whether the most attention should be devoted to the city water supply, or the country privy. What is the infant death rate? Is the case fatality of diphtheria too high? Is tuberculosis decreasing as fast as it should? These vital questions, vital in every sense of the word, can be answered only by an accurate registration of births and deaths. Only twenty-five states are in the registration area for deaths, and ten in the provisional area for births—a poor showing, but indicating great recent progress.

2. The control of communicable diseases is still the chief function of the health department. Under present conditions little will be done except in the largest cities unless the state department takes the initiative. All but three, or four, of the smallest states need an epidemiologist, a real epidemiologist. The large majority of the states need more than this. They need a well organized, well financed division of communicable diseases. Few states are thus provided. Most of them are content to rush out their executive officer to hurry calls for smallpox outbreaks. Little systematic routine work is done. Perhaps a dozen states are trying properly to keep the run of communicable diseases, and most of them are not too successful. The first requisite for control is notification. Notification is much better in the cities. It is the duty of the state officials to make it equally good all over the state.

The Public Health Service in 1914 attempted to utilize reports of communicable diseases from only thirty states. An examination of the case fatality shows that in less than a dozen is it likely that diphtheria is reported with sufficient accuracy to make returns of any use for either statistical or administrative purposes. The reports of typhoid fever and tuberculosis are far less satisfactory than for diphtheria. The number of communicable diseases is so large and the amount of work to be done is so great that some have thought it best to have separate and coordinate divisions in the health department for certain diseases, as tuberculosis or hookworm infection. The trouble with this arrangement is that the disease thus honored receives more than its due attention. The communicable disease work ought to be well balanced, and at first thought it would seem best to have one man in charge of all communicable diseases. If this makes the bureau too unwieldy, and separate di-

visions seem to be necessary, the executive should see that they are properly balanced. This is no easy task, as the Legislature is quite likely to decide matters under pressure from enthusiasts who can see nothing but tuberculosis, or trachoma, or hookworm or venereal disease.

The diagnostic laboratory is at present an important part of the state health department. It, too, may well be a subordinate portion of the epidemiologic division. If co-ordinate with the latter, the executive has another task in seeing that the two really are co-ordinate and work together effectively. The time ought to come when the state laboratory will be able to abandon its diagnostic work to local laboratories scattered over the state, and will be free to devote itself to the administrative and research problems of the central department.

It is only by the proper development of epidemiologic work that the enormous value of antitoxins and vaccines can be secured to the people of the state. These must be distributed free and freely, and must at times be administered. Whether it would be better for the free distribution to be by the state or by the local governments is perhaps a local question. In some instances the state appears to do it with advantage. In others, the towns or counties seem to do their share well. If it is left to the local government, the state department should see that there is a good law and that the local governments do their duty.

3. Child hygiene is a subject which has been much neglected. In most of the larger Northern cities it has been shown that infant mortality can be markedly reduced by proper efforts. Infant mortality has been excessive, not only in the large cities, but fully as much so in the smaller urban communities, and conditions in villages are often equally as bad. Over large sections of the country, in the absence of statistics, it is not even known what the infant mortality is. That there is scarcely a place where it is not possible to reduce it greatly is improbable. The saving of babies' lives is one of the most effective and certain lines of public health work. It gives quick returns. The death rate is reduced the first year. While the actual work of baby saving is essentially local, the state can set the wheels in motion, as has recently been well illustrated in New York. No state can longer afford to neglect this field.

The medical inspection of schools does not yield such brilliant results. Not many lives are directly and immediately saved. The improvement of countless minor evils, even if they were such as to cause further trouble, is not spectacular. Both city and the state health departments have allowed school officials to take the initiative in school inspection. This is unfortunate, as school inspection is essentially a health function of the state. It is very desirable that all the health work of a city, or state, be centred in one department. School inspection is medical work, and the medical work of the state and its municipalities is certain to increase. It will be unfortunate to have it scattered among different departments. The health department should be the controlling factor in all state medical work.

4. The supervision of water and sewerage is a most important function of the state. This requires the services of one or more engineers, chemists and bacteriologists. Other matters, such as schoolhouse and institution construction, offensive trades and other nuisances, and land drainage often require the services of this division, though the promotion of the purity of water supplies is its most important duty. Some of the smaller states find an engineer with chemical and bacteriologic training sufficient to do most of the needed work, but all the larger states require a well organized division, sometimes with many employees. At present about half of the state health departments have no engineer in their employ.

5. Public health education is rightly considered of very great importance. It should occupy a good part of the attention of every department. Almost all health officials imagine that they are particularly qualified for carrying on educational work. While a great many health officials have the knack of writing catchy paragraphs and of interesting hearers at a lecture, few are really well fitted to have charge of the educational division. Such a person should first of all have sound judgment. It is necessary to select the wheat from the chaff. It is impossible to teach everybody everything. Attention should be focused on what is most important. Essentials should be ad-

hered to rather than every new slogan repeated that is sounded by some enthusiast. The choice of method, too, is as important as the choice of subject. Novelty is not always to be sought. What is necessary is to make knowledge sink in. To catch the ear or the eye of the populace for a moment does not always do this. What the department needs is a teacher, not an advertiser.

6. In sixteen states the health department is charged with the administration of the pure food laws, though in some of these practically nothing is done by the department. The prevention of adulteration is the chief purpose of most of these laws, and this phase of the subject embraces most of the food work. The prevention of adulteration, except in a few instances, is an economic, not a health problem. It is true that the sanitary handling of food does, in some directions, and to some extent, affect the public health; and practically all of the state departments of health engaged in the prevention of adulteration do attempt to secure greater cleanliness in the handling of foods, though how effective this is, at times, is open to question. There is a difference of opinion as to whether or not there should be a food division in the health department. As this is a matter which no more affects health than a thousand and one other things, and as it diverts energy and money from purely health work, and as it is likely to arouse opposition to the health department on the part of powerful interests, it would seem better on the whole not to undertake this line of effort. Still, as some departments have long and successfully carried on food work without detriment, it is perhaps safe to allow the decision to depend on local conditions. The sanitary control of milk is of much more importance, but here again there is difference of opinion as to what should be done, or how much should be done. The attempt of the state really to control the entire milk supply has never been very successful. Perhaps the best work for the state is to educate, to secure legislation to permit of efficient local control, and to assist local officials, especially those in the smaller communities.

7. In the last analysis, the success of most public health measures depends on the man on the spot. In other words, there must be local health officials to carry out the details of many of the most important measures of disease prevention. This is by far the weakest point in the whole public health system. The larger cities are doing fairly well. Most of the small towns are not. Most of the rural portion of the country is doing nothing. Health administration cannot be left to work out its own salvation. Some outside agency must at least point out the way. This is properly the business of the state. It is the duty of the state health department to strive to make health work efficient all over the state.

All sorts of schemes have been suggested and some of them have been put in effect. None have been in successful operation long enough to show that an ideal has been found. A number of states last winter had carefully prepared bills to improve local health administration, but they did not receive favor at the hands of the legislators. Conditions vary a good deal, as to prevailing diseases, wealth, density of population, political customs and ideals. What may prove to be the best plan in Massachusetts probably would not be the best in California or Mississippi. As regards methods of local health work we are still in the experimental stage.

Where the township form of government is well developed, township health officers have very generally been provided for by law. In many states it would be difficult to get away from the township idea. The attempt to do so has been unsuccessful in some states. Is it not the wisest course, in such states, to accept frankly the township health officer? Of course in most townships there is not enough work for a full time officer. The part time health officer cannot be left to himself. He must be under continuous supervision by the state, thus becoming practically a deputy under a district supervisor. This is the Massachusetts plan, and seems to me to be the best solution of the problem for the present in a number of states. The combination of townships, or of towns, with a full time health officer, which has been successfully accomplished in a few instances, ought to be brought about in many more.

In some parts of the country, as in the South and some parts of the middle West, the county is thought to be the proper unit for efficient health work. In most instances

a full time health officer is necessary for successful county work, and many who are most conversant with the conditions believe that they warrant the employment of a full time man. In some counties, even with a full time health officer, deputies also might be needed.

In other parts of the country, where the population is not so dense and where for other reasons not so much work per square mile needs to be done, artificial districts, consisting of combinations of counties, are suggested. In these districts, and indeed in some of the large counties found in the Mountain and Coast states, deputies are necessary, though on account of the great area rather than because of the number of people to be cared for.

The local health officers and deputy health officers who do the bulk of the routine work must be good men. The manner of selecting them is of great importance. Most state officials believe that they ought to be appointed by the state. This is the practice in only a very few states. There are decided objections to the plan, the most important of which is the danger, almost a certainty under present condition of morals, of building up a political machine. Whatever our theories may be about this, there is great popular as well as political objection. Popular regard for home rule makes it an impossible measure, probably, in most states. The bills presented last year in Indiana, Kansas, Michigan and Ohio, I believe, all provided for local election. All of these bills did, however, provide for some sort of control of qualifications. This would seem to be a legitimate, useful and acceptable means of state control.

It is also recognized that even good men will not work and should not be asked to work without adequate compensation. In Florida and in a good part of Pennsylvania the state pays, as well as appoints, the local health officer. It seems to be impracticable, and I believe it to be unwise, to do this in most states. Instead of this the compensation which is to be paid by the local governments may be fixed by the state. This attempt, too, has not been very successful; but it gives better promise than the plan of having the state carry on all local administrative work at its own cost.

Whether there are county health officers, township health officers, or district and deputy health officers, in order to have an efficient local administration there must be an effective supervision by the state department of health. All health officers need, and most desire, help from without. The state department of health should be prepared to give this help. It should also have authority to compel action. Even with a full time health officer in every county, supervision by the state would be necessary. Even without authority, and without any reorganization of local health institutions, in probably nearly every state, great improvement could be brought about by the continued efforts of even one skilled administrator who should devote his time to the stimulation of local health officers and of the communities in which they work. To do this requires no novel legislation and no radical change in policy. One such unofficial advisor may be appointed this year and another next year, or the year after. It is a promising field open now to every state department of health.

Most health officers believe it is a great help if the state has some means of coercion. Many communities can be persuaded to do right; others cannot. Some people will listen to reason only when they know that they must. It is wise to give executive power to the state department of health. If it is known that the state can step in and abate nuisances and control communicable diseases, it may compel local officials to act. Often local officials are glad of this pressure, which to them is a help. The pressure is greater, if, when the state acts, the cost becomes a charge on the local government. If this authority is exercised with discretion, it will be wholly for good. Believing that it will be so exercised, legislators have not been markedly adverse to conferring such power on the state department of health, and it has been done in almost half of the states.

There is one other point which ought to be emphasized, and that is the desirability of having as much as possible of the health work of the state centred in the health department. To have a number of commissions and boards, as well as the state university, working independently in the field of preventive medicine is bad. It does not

make for economy or efficiency, and it prevents solidarity in education and administration. The public is annoyed and rendered skeptical by a multiplicity of inspections, rules and precepts. It is highly desirable to utilize the scientific knowledge of the university and infuse its scientific spirit into public health work; but I am old-fashioned enough to believe that it is not desirable for the university to take on administrative functions, and it is not desirable for it to engage in any kind of public health work except under the direction of the health department.

"THE DENTAL PATH: ITS IMPORTANCE AS AN AVENUE TO INFECTION"

By THOS. B. HARTZELL, D.M.D., M.D., and ARTHUR T. HENRICI, Minneapolis, Minnesota.

In order to give this paper the greatest potential value possible to those interested in preventive medicine, I shall take the liberty of discussing only, those types of infection which are most common, not attempting to deal either with the rare infections or those now well understood, of which latter diphtheria is an example. It is indeed true that the mouth, by reason of its size and function, is probably the host at one time or another of almost every type of bacterial growth. The great majority of these growths, however, are visitors and not permanent inhabitants. It is the permanent inhabitants that are found in all mouths which interest us most, and, of these permanent inhabitants, there is not one possessing such varied possibilities for disease as the streptococcus group, and to it we will devote most of our attention. I wish to state clearly in the beginning that in discussing the varied activities of the streptococci. I am well aware that I am not bringing new material regarding the activity of this organism. We all know that most of the lesions in diffeernt parts of the body produced by the streptococci have been studied in detail by many observers. I do wish, however, to make the point that while Rosenow, Klotz, Poynton and Payne, and many others have worked with the streptococcus, they have wrought without particular reference to the dental avenues of infection, and it was not until the work of Goadby, published in 1912 in the Rheumatism number of the London Practitioner, Limited, that particular reference to the tooth avenue of infection received systematic or detailed study in the English language. Goadby had in the years 1910, 1911 and 1912 carried on a series of studies by which he was able to produce experimental rheumatism in rabbits, and, by the elimination of primary foci in the dental tract and the use of vaccines to supplement elimination, he was able to secure the recovery of three severe cases of arthritis deformans. To him, therefore, I think must be given the credit for publishing the first observations on the relation of dental infection to that form of rheumatism.

If there be anything of marked value in this paper which may be of future use, it will be in the fact that it offers definite and positive proof that the so-called dental path of infection hitherto little appreciated is shown to be important and that organisms taken from the dental path have produced in animals almost all of the forms of lesion hitherto described; to wit, lesions of the heart muscle and endocardium, lesions of the kidney, focal and diffuse, lesions of the adventitia of the blood vessels, and lesions of joints and muscles. The evidence of Poynton and Payne(1) gained by creating an experimental iritis in the eye of a rabbit by introducing streptococci in the circulation of the animal, together with the positive clinical re-

*Read before the Southern Minnesota Medical Association, Aug. 2nd, 1915. Printed also in Surgery, Gynecology and Obstetrics.

sults gained by the treatment of our twenty cases of iritis, enables us to place iritis in this category also.

Before proceeding to further discussion of infections, I wish to speak of the dental tract itself. We have in the dental tract the masticating mechanism originating in the epithelium of the mucous membrane, budding and projecting from it into the tissues to later become inclosed by bony walls which grow and finally almost envelope it. Its direction of growth in the first instance is downward and into the tissues, the tooth later bursting the very mucous membrane from which it originated. The mucous membrane is designed to protect the tissues, blood stream, and lymphatics from infection. The union of the mucous membrane to tooth structure is always, after the eruption of a tooth, imperfect and capable of admitting infection. It is a notable fact that the dental structure has no protecting device, save its coat of enamel. If this be in any way imperfect there seems to be no anti-bodies nor protecting leucocytes in the saliva to save it from the disintegrating effect of bacterial action. Unless aid be given by thorough cleansing of tooth surfaces, the integrity of the tooth is sooner or later destroyed by acid-forming micro-organisms which make its surfaces their home and later enter into its structure. How great a site for bacteria the tooth surface is can only be appreciated by the use of some method of staining bacterial masses in situ. If in the study of mouth infections, particularly those about the teeth, the observer will use a disclosing solution as recommended by Skinner, freely applied to the tooth's surface, he will bring to view macroscopically, masses of living bacteria, which Kligler(2) has shown to contain twenty to six hundred million to the milligramme. These will be found on cultural and microscopic examination to count among their numbers, the streptococcus, the various staphylococci, the pneumococcus, the spirochaete macrodentium and microdentium generally, and always the fusiform bacillus. In addition to these already mentioned are two protozoa, the entamoeba buccalis, and the trichomonas intestinalis. It will be seen from a study of the flora of the tooth surface that this flora always has the potentiality for infecting the soft tissues about it and our next step will be to show the capability of the structures about the tooth to receive infection from it.

Our next point of interest, therefore, is the gingival crevice or gum marginal crevice, in total length about thirty inches, protected by a tough pavement epithelium, but containing almost no epithelial protection at its point of its point of union with the tooth structure. This lack of protection is well illustrated by recent preparations of Henrici, originally made to demonstrate the vascularity of the tissues immediately surrounding the teeth, but showing as well the lack of mucous membrane protection at the gingival crevice. It will be seen by a study of these pictures that motile organisms growing on the tooth's surface or organisms which reproduce rapidly may readily pass into the delicate openings in the bottom of this crevice, thus gaining direct access to venules and peri-vascular lymph spaces in these structures, with nothing to hinder their transfer to the deeper tissues by the lymph and blood streams. This process is in the majority of individuals greatly aided by the formation of calculus on the root surface or at the gingival margin. When once an organism enters the tissue at this point its future progress into the tissues is hastened by the vast power of mastication, the sum of masticatory pressures, amounting to about one ton per day in the average individual. The masticatory force depresses the tooth in its joint or socket and the elasticity of the tissues causes rebound when the power of occlusion is released. The tooth, therefore, plays the part of a piston during mastication with the average movement of a sixtieth of an inch. It cannot be doubted that this movement aids the ingress of organisms to the underlying tissues through the unprotected areas of the gum crevice. The masses of bacteria growing on the tooth's surface and in the gingival crevice, even if they do not always gain access to the tissues in the way just described, produce enzymes and irritating toxins, which inflame the gum margin, resulting in oedema and further favoring bacterial development in this thin wedge of tissue. This

brings about as a rule destruction of the few cells lining the crevice, causing ulceration, paving a way presently to pyorrhea and providing the potential for peri-dental inflammations such as abscess, etc. The writer has record of one hundred and fifty teeth which were absolutely sound as far as the enamel was concerned, the pulps of which had been destroyed by infection, and we quite often find teeth, the pulps of which are undergoing profound inflammation without having been exposed by decay. The most plausible explanation for this is, that this richly vascular tissue surrounding the tooth has received infective organisms from the tooth's surface which have been conveyed through the vessels to the pulp, as we have been able in these newly-opened pulp chambers. It is not surprising, therefore, that we have abscesses in the tissues about living teeth as well as about dead or pulpless teeth, because the conditions favor the planting of infection in this locality. It may be that a dead tooth provides a "locus minoris resistentiae"(3) in its neighborhood, but to accept this as a principle governing the formation of abscesses about all dead teeth, or even in the majority of instances, I regard as premature and likely to lead to a wrong attitude on the part of dentists and physicians concerning a very vital subject. In the study of a series of acute dental abscesses during the past year we find the staphylococcus the active organism, while in the study of material taken from 250 chronic abscesses of the cystic or granulomatus type, the streptococcus viridans is found to be the predominating organism. All teeth whose pulps have become exposed through the medium of caries are infected and mastication into the pulp chambers of such teeth insures infection of the para-apical tissue. Teeth which are heavily coated with bacterial masses, particularly the protected surfaces in the proximal spaces, are capable of and do plant infection in the tissues contiguous to them. A further evidence of how readily this may occur is shown by a series of recent experiments with oxygen under compression which was discharged into the gum crevice from a blunt needle, not thrusting the needle deep into the crevice, but only half way toward the bottom. The oxygen will enter and be seen to lift the tissues back toward the palate and many times bubbling out of the tissues from the gum margin of a tooth a half or three-quarters of an inch removed from the point of entrance. This shows the extreme looseness of attachment of the peri-dental membrane and the ease of its infection. If pyorrhea obtains for some time, say long enough to produce an average depth of ulcerating surface of a quarter of an inch about each of the teeth, we then have an ulcerating surface of seven and one-half square inches. If the average depth of pocket was only one-eighth of an inch, we have an ulcer equivalent to three and one-fourth square inches. Compare this ulcerating surface infected with all sorts of organisms to the greatest possibility of the tonsils with eight to sixteen crypts in each, and you have some idea of the relative importance of the dental tract in the planting of general infection.

Ulrich in his paper entitled "Some Medical Aspects of Dental Disease,"(4) teaches that dental abscesses originate in the blood stream but does not tell us how the infection enters the blood claiming that the lack of vital pulp is the determining factor in the locating of abscesses. As a matter of fact, hundreds of pulpless teeth are in use that are not abscessed. It is needless to state that septic root canals are responsible for many dental abscesses and it is true that modern methods have made possible the safe retention of such teeth where the individual is otherwise in good health, but on account of the exact technic necessary to gain and maintain asepsis in such teeth, they should always be kept under surveillance by radiographic methods. Our own conclusions and belief regarding the infections that occur in the dental tract are that they usually enter by and through the gum crevice, venae, peri-vascular lymph spaces and root canals when opened by ulceration, decay, or careless operative procedure.

Two years ago the scientific foundation and research commission of the National Dental Association placed in our hands a sum of money ($2,000 per year), which we determined to use to gather evidence of the relationships that mouth infections bear to metastatic infection of other parts of the body. This research has been car-

ried on in the laboratories of the school of medicine and has been assisted during the past year by an additional grant of funds from the research department of the graduate school. The laboratory procedures have been carried forward by Doctor Henrici of the school of medicine. Our endeavor has been to approve or disapprove, as the case might be, the clinical evidence tending to connect infections about the teeth with distant secondary infections of other parts of the body. To that end, we have used bacterial cultures obtained from both pyorrhea pockets and apical abscesses of individuals suffering secondary infection. From our first series of cases resident in the University Hospital we were able to produce lesions of heart muscle and endocardium.

Case 55 was that of a married woman of 40 years of age, of German descent, by occupation a housewife, weight one hundred and fifty pounds, of good habits, with no trace of familiar or venereal disease. When she came under our care, January 18th, 1914, she had pyorrhea alveolaris, congestion of the lung bases, cardiac hypertrophy and dilatation, acute hypertrophy and dilatation, mitral incompetency and stenosis, acute arthritis, with swollen joints. The culture material was obtained from pyorrhea pockets and extracted roots. Its effect on the heart muscle of a rabbit was profound as you note. The result of treatment in this case was quite satisfactory.

Besides lesions of the heart muscle, lesions of the heart valves are most commonly associated with rheumatism.. The relationship of the streptococcus viridans to endocarditis has been produced in rabbits by inoculation with streptococci repeatedly, especially by Poynton and Payne and by Rosenow.

Lesions of the blood vessels accompanying rheumatism were noted in 1828 by Trousseau, Archiv gen. de Med., Paris, 1828, tome XVI, p. 499, and also by Hanot, Presse, Med., Paris, 1896, tome I, page 649, who supported his observations by autopsy.

"Roche and Burnand(5) report the case of a man, age thirty, who had long suffered from rheumatism. His first attack had occurred seventeen years previously and since then he had suffered recurrent attacks, in each of which the heart was more or less involved. Recently, his heart failed to compensate for the severe lesions of the mitral and aortic valves. When seen by the author, he was cyanosed and showed oedema of the lower extremities. He had continuous fever of moderate degree. After some weeks his temperature suddenly went up, and he complained of pain in the left arm, which continued to increase. In three days the radial pulse was again obtained. After some weeks a mass appeared close to the upper humerus which was quite painful to touch. Later on, the patient developed a similar lesion in the left arm."

"Much other material may be found bearing on this same question of vascular lesions from Leger(6) and Hanot(7) who described rheumatic aortitis, while Rabe(8) has studied rheumatic disease in the coronary artery. The latter described two principal lesions, one consisting of a proliferating endarteritis, the other of a diffuse mesarteritis. It is probable that the other peripheral arteries react i na manner similar to but milder than in the coronary arteries"(9).

We have made the above citations and show the following arterial lesion pictures to suggest the fallacy of the old established belief that all aortic arch lesions are specific when it is quite possible that some may also be of streptococcal origin. The relationship of rheumatism to diseases of the aortic arch has been recently studied by Klotz.(9) who finds constantly a characteristic lesion of the adventitia.

In a recent series of thirty animals inoculated with ordinary salivary streptococci by us, we have found a number of animals whose joints are filled with pus containing streptococcus viridans. They also exhibit heart muscle infection, and well-formed vegetations on heart valves, focal infections of the kidney as well as diffused kidney infection. If ordinary salivary streptococci will produce these lesions just as will streptococci taken from the dental abscess or the pyorrhea pocket, it would seem well worth while to give greater attention to closing the door to this infection by treatment directed toward the prevention and cure of

pyorrhea and dental abscess and the maintenance of health in the whole dental tract.

In addition to the lesions already shown which involve heart muscle, endocardium, and vessels, we desire to show you pictures of focal and diffused infection of kidneys produced from material taken from a dental abscess from case fifty-nine, which produced two types of streptococci, one growing grey on blood agar, the other growing green. Both strains were isolated in pure culture. In massive doses, broth culture produced death in twenty-four hours in smaller doses (eight cubic centimeters), death occurred in forty-eight hours. The green strain produced hemorrhage into the mitral cusp of the rabbit's heart, the other strain, produced minute multiple abscesses throughout the kidney cortex. The streptococci were re-obtained in pure culture from the blood of both rabbits, and, after twenty-four hours' incubation were injected into two new rabbits in five cubic centimeter doses. Both of these rabbits died within forty-eight hours. The autopsy revealed no lesion save for a large number of miliary abscesses in the cortex of the kidneys. The streptococci were again recovered in pure culture from the heart's blood and from the kidneys. They show bacterial emboli, and the capillaries of the cortex have surrounding areas of inflammatory infiltration which exhibit both polymorphonuclears and lymphocytes. There was a pronounced necrosis in the breast muscles of a pigeon, inoculated with this strain, which died within twenty-four hours. Our comment on this strain is that we have apparently an organism belonging to the streptococcus viridans class possessing a high degree of virulence which is indicated by the rapidity with which it causes death in animals and by the fact that it calls out pus cells in the infected animals. We note also that this strain shows a marked affinity for kidneys as there were no joint lesions and no heart lesions except a valve hemorrhage.

While we have not done systematic research with the other constant bacterial inhabitants of the mouth we have dealt practically with many cases of secondary infection in which the primary lesion commenced in the dental arches and resulted in multiple abscesses in different parts of the body.

A recent case, that of a youth of sixteen, developed an acute primary abscess in a lower central. This resulted in a general septicaemia producing abscesses in different parts of the body, the most pronounced of which were in the gluteal muscles. The primary effect of the infection in the jaws was to destroy the whole body of the lower jaw from the ramus forward, the whole body of which has been removed gradually, retaining only enough of it to act as a splint while the new body has developed.

Cases of this type are fairly common particularly in the mouths of people who are careless in the care of their teeth.

A second case of the acute staphylococcal type was that of a physician with a primary abscess about a lower molar which resulted in the loss of one inch and a half of bone and the destruction of the facial nerve on the right side.

A third case of similar nature, a primary staphylococcal abscess about the lower third molar in the mouth of a young Swedish girl, resulted in the loss of the angle of the jaw and secondary metastatic abscesses in other parts of the body.

In addition to these cases we have on record the experience gained in the care of six individuals who died as a result of primary mouth infections spreading to other parts of the body in which cases autopsy disclosed only the mouth as a primary focus. One of these deaths was due to a fusiform bacillus infection originating around two central incisors. The primary culture and smear disclosed enormous numbers of fusiform bacilli in this slough and a blood culture taken by Doctor Larson disclosed a general fusiform bacillus infection in the blood stream. Our experience with the damaging effects of the diplococcus as a mouth inhabitant is limited to one case in which the primary infection around a bicuspid yielded the diplococcus pneumonia in large numbers. Removal was coincident with a pneumonia involving the lower lobes of each lung. The patient made an uneventful recovery from the pneumonia two years ago last winter, only to die of

a second pneumonia, January, 1914. The infected socket had been the host of this stinking abscess for some five years prior to its removal. Surely the responsibilities of those who have to do with the prevention of the development and growth of streptococci in the mouths of people are of a grave nature indeed. Bacteria grow on the mucous membranes but sparsely as compared to enormous numbers, particularly of streptococci, which grow on tooth surfaces and in gum crevices, and the further fact that we have direct continuity of tooth's surface to the imperfectly protected gingival crevice makes the tooth's surface, when loaded with organisms, a factor worthy of the serious consideration of those who deal with human life.

References.

1. Research on Rheumatism, p. 213.

2. Journal of Allied Societies, September, 1915.

3. Ulrich, Dental Review, 1914.

4. Journal of the Allied Societies, 1914.

5. Roche and Burnand, Semaine Med., Paris, 1908, tome XXVIII, p. 145.

6. Leger—"These de Paris," 1877.

7. Hanot—Press Med., Paris, 1896, tome 1, p. 649.

8. Rabe—Presse Med., Paris, 1902, tome 11, p. 927.

9. Quoted from Klotz, Journal of Pathology and Bacteriology, Vol. XVIII, 1913.

9. Klotz, Journal of Pathology and Bacteriology, Vol XVIII, 1913.

The Great Consulting Room of a Wise Man is a Library—Dawson

THE CHILD IN HUMAN PROGRESS—By George Henry Payne—With Foreword by A. Jacobi, M.D., LL.D.—Illustrated — G. P. Putnam's Sons — $2.50.

There is a unique place for this book. It is a storehouse of undiluted information, a vade mecum of child history in all nations and eras. Does the reader wish to know of the progress of child welfare under the Arabian, the Chinese, the Roman, the Hindu, the Acadian, the Peruvian practice? Would he traverse the subject in ancient or in modern times? It matters not which. Here or nowhere is his fruitful quest. Does he wish to investigate child sacrifice among the Hindus, the Israelites or the Mexicans? He needs go no further. Our author will give him the desired information or at least furnish him with the clue.

The benign influence of Christianity in the amelioration of conditions relating to childhood is one of the distinctive features as revealed in the history of the subject. The Church has few claims to our gratitude more substantial than that which its kindly influence over the child's welfare affords.

Many side-lights on well-known historic characters are found in this volume. Among these, and much to the credit of those named, are incidents in the lives of Trajan, the Antonines, Constantine, Theodoric, and Alfred. The Romans, in many respects so hard and cruel, are here shown in milder character, much having been done by them to protect the child and improve his status.

The Hammurabic Code has many laws relating to children. Our author presents them here in much detail. It is remarkable that a pension to mothers is pretty clearly shown to have existed among the ancient Sumerians nearly a thousand years before the time of Moses and at least three or four centuries before that of Abraham.

It is no part of the plan of this book to express opinions or theories, or to give suggestions, a rule which the author never violates. But the reader cannot help reflecting that in this age and in this civilization when children are supposed to be the most valuable asset of the nation, many a widow has to rear, as best she may, a large family of young children without the slightest state aid, when a substantial recognition of the great work she is doing for the state would greatly enhance the value of that work and relieve her of an altogether unfair and unjust anxiety which quite overtaxes her resources and destroys her health and happiness.

This valuable work contains forty excellent illustrations.

THE NEW PUBLIC HEALTH—By Hibbert Winslow Hill, M.B., M.D., D.P.H., late Director, Division of Epidemiology, Minnesota State Board of Health, and later Executive Secretary, Minnesota Public Health Association, now Director, Institute of Public Health, and M.O.H. of London, Canada: Professor of Public Health, Western University—The Macmillan Co., 1916—$1.00.

"The New Public Health," by Dr. H. W. Hill, Director of the Institute of Public Health, London, Ont., is a volume which every Medical Health Officer should possess. While numerous works upon this subject are to be had, few are so stimulating and full of interest. Dr. Hill deals with the subject in a fresh and interesting manner. Old problems are lightened up and practical suggestions are offered for the conscientious health worker.

The problems connected with the various infectious diseases which form such a

large part of the Health Officer's duties are fully dealt with and the author can be depended upon for the very latest views upon them.

"That the old public health was concerned with the environment; the new is concerned with the individual," is one of his statements. "The old sought the sources of infectious disease in the surroundings of man; the new finds them in man himself." These ideas are fully elaborated throughout the book, and the author is to be congratulated upon his clear and interesting presentation of the various health problems facing not only the medical health officers in their professional duties, but for adding to our store of literature upon public health a volume which should prove most readable and instructive for the layman as well.—G. D. P.

A PRACTICAL TEXT BOOK—"A Practical Text-Book of Infection, Immunity and Specific Therapy—With special reference to Immunologic Technic"—By John A. Kolmer, M.S., Dr.P.H., Instructor of Experimental Pathology, University of Pennsylvania — With an Introduction by Allen J. Smith, M.D., Sc.D., LL.D., Professor of Pathology, University of Penn.—With 143 Original Illustrations, 43 in colors—By Erwin F. Faber, Instructor of Medical Drawing, University of Pennsylvania — W. B. Saunders Company, Philadelphia and London—Price $6.00—J. F. Hartz Co., Toronto.

The publication of this text-book of nearly 900 pages, dealing with Infection, Immunity, including immunological technique, and specific Therapy, is in itself an indication of the rapid development and the great practical importance of this branch of medical science. In studies along this line lie the greatest present interest and the most hope for the future advancement of medicine—preventive as well as curative. For this reason it is essential that every physician, even though unable himself to apply the difficult technique, should at least have an appreciation of the principles and practical application of the work. To these as well as to workers in this branch, a text-book by a recognized authority, will be an invaluable guide. The text is full, beautifully and profusely illustrated. The theories of infection, immunity, the subjects of ananphylaxis, complement fixation, active immunization against various diseases, etc., are fully dealt with. The value of the work to practitioners and clinicians is further evidenced by the full discussion of serum treatment of various infections, of auto-serum therapy, normal serum therapy, chemotherapy of malignant disease, and the indications and technique for the use of salvarsan. The publication is deserving of a warm reception by those interested in keeping up with scientific medical progress.

HOW TO LIVE—Rules for Healthful Living based on Modern Science — Authorized by and prepared in collaboration with the Hygiene Reference Board of the Life Extension Institute, Inc. — By Irving Fisher, Chairman, Prof. of Political Economy, Yale University, and Eugene Lyman Fisk, M.D., Director of Hygiene of the Institute.

The Public Health man is doing a recognized public service. The people and the law-makers respond to his appeal where they fail to respond in the case of reformers, who have troubles and opinions merely of their own. He can show facts and figures with a sort of you'll be damned if you don't authoritativeness. He is able to warn against a sort of antemortem hell which gives his words a vivid persuasiveness.

The members of the Institute, whose Committee's report is published here, are to be congratulated on the delightful interest and perspicacity of this book. The findings of the Institute are so conclusive that there seems to be but one possible outcome in many of the matters to which it relates. Ten million copies would not over-supply this continent with this desirable work.

The chapter on Eugenics is one of the clearest, sanest presentations of the Mendelian law of heredity heretofore published. This law, which should be clearly understood by every marriageable young man and woman, is here applied to the problem of the feeble-minded in a manner so convincing as to close the argument and open the way for effective legislation and institutional action.

Every family should have access to this work, not merely to read, but for frequent reference.—A. D. W.

THE ONTARIO MEDICAL ASSOCIATION

THE Ontario Medical Association will hold its Annual Meeting in Toronto, beginning Wednesday, May 31st, 1916, for three days, in the Mining Building, College street.

9 a.m.—Registration.
10 a.m.—Business Session.
12 a.m.—An Organ Recital—Convocation Hall.

"Drugs and Medicinal Agents Considered from the Professional, Economic and National Standpoints," by Prof. A. D. Blackader, Montreal.

Address in Gynecology, by Dr. J. F. Percy, Galesburg, Ill. Subject: "Heat Problems, or the Method of Treatment in Cases of Inoperable Uterine Carcinoma."

"Tonsillectomy, with its General Results," by Dr. Justus Matthews, Mayo Clinic, Rochester, Minn.

Election of the Nominating Committee.

In the evening at eight: President's Address, by Dr. H. B. Anderson.

8.45 p.m./The Address in Medicine, by Dr. Elliott P. Joslin, Boston. Subject: "The Treatment of Diabetes."

On Thursday, June 1st, from nine to twelve o'clock, the Sections in Medicine, Surgery, Obstetrics, and Ear, Eye, Nose and Throat will meet.

Programme in Medicine:

"Pernicious Anemia," by Dr. Charles McKay, Seaforth.

"Radium as an Auxiliary in the Treatment of Exophthalmic Goitre," by Dr. W. H. B. Aikins, Toronto.

"Indications for and Results of Artificial Pneumothorax in Phthisis," by Dr. C. D. Parfitt, Gravenhurst.

"Duodenal Feeding with Tube," by Dr. Cleaver, New York.

"Treatment of Constipation," by Dr. Campbell, Napanee.

"Treatment of Lues in Children," by Dr. George Smith, Toronto.

"Arterial Hypertension," by Dr. Boyce, Kingston.

"Wasserman Reaction in Relation to Diagnosis and Treatment of Syphilis," by Dr. Hugh Laidlaw, Kingston.

"Protozoan Infections," by Dr. L. G. Pearce, Brampton.

"Syphilis with New Arsenical Preparations," by Dr. Gordon Bates, Toronto.

Programme in Surgery:

"Appendicitis," by Dr. M. O. Klotz, Ottawa.

"Gall-Stones," by Dr. I. Olmstead, Hamilton.

"Pyloric Stenosis in Infants," by Dr. W. E. Gaillie, Toronto.

"Fractures, including Compound," by Dr. Seaborn, London, and Dr. J. M. Rogers, Ingersoll. Discussion opened by Dr. T. H. Middleboro, Owen Sound.

"Intestinal Obstruction," by Dr. H. A. Bruce, Toronto.

"Renal Calculi," by Dr. W. W. Jones, Toronto.

"Conservative Surgery in Injuries of the Hand," by Dr. N. A. Powell, Toronto.

"Transfusion," by Dr. F. N. G. Starr, Toronto.

"Perforating Ulcer of the Stomach," by Dr. McGregor, Hamilton.

"Treatment of Cancer by Fulguration," by Dr. J. E. Hett, Berlin.

"The Relative Merits of the Steel Plate and Bone Graft in the Treatment of Recent Fractures," by Dr. E. R. Secord, Brantford.

"Pulmonary Abscess following Abdominal Operations," by Dr. Angus McLean, Detroit.

"Duodenal Ulcer," by Dr. A. H. Perfect, Toronto.

Programme in Gynecology and Obstetrics:—

"Treatment of Dysmenorrhea," by Professor William Weir, Cleveland.

"Morphine and Hyoscine in Obstetrics," by Dr. A. Kinnear, Toronto.

"Blood Transfusion in Hemorrhage of the New-Born," by Dr. Alan Brown, Toronto.

"Gelatine in Hemorrhage of the New-Born," by Dr. McIlwraith, Toronto.

"Apparatus Used in Blood Transfusion," by Dr. Unger, New York.

"The Female Pelvic Floor and the Part it Plays in Obstetrics and Gynecology," with moving pictures, by Professor T. H. Morgan, New York.

"Eclampsia," by Dr. J. F. Goodchild, Toronto.

"Diagnosis and Choice of Operations in Retrodisplacements," by Dr. A. C. Hendrick, Toronto.

"Persistent Occipito-Posterior Position in Relation to the Country Practitioner," by Dr. Charles Page, Oakville.

"The Walcher Position in Obstetrics," by Dr. Arthurs, Sudbury.

Programme in Section of Ear, Eye, Nose and Throat:

"Foreign Bodies in the Esophagus," with slides, by Dr. Edmund Boyd, Toronto.

"Treatment of the Blind after the War," by Dr. B. C. Bell, Brantford.

"Orthodontia in its Relation to the Nose and Throat," by Dr. G. W. Grieve, D.D.S.

"Nose, Throat and Accessory Sinuses in Relation to Systemic Diseases," by Dr. D. J. Gibb Wishart, Toronto.

Thursday afternoon: Address in Surgery by Prof. Dean Lewis, Chicago.

"Treatment of Pneumonia," by Prof. Solomon Solis Cohen, Philadelphia.

Business meeting.

In the evening Dr. Weston A. Price, D.D.S., D.S.C., M.E., Cleveland, will give an address on "Mouth Infections and Some of the Mechanisms by which they Produce Localized and Systemic Diseases."

Prof. John Wyeth, Prof. John A. Bodine, and Prof. C. H. Chetwood will illustrate some operations by moving pictures.

On Friday afternoon there will be a Military Section in which subjects of interest to the Army Medical Corps will be discussed.

On Friday evening Prof. Stephen Leacock will give an address.

ROMANTIC CZARS

By FLORENCE WITHROW

(Continued.)

THE CZARINA ELIZABETH, never having married, had no lawful heirs, hence she chose the son of her sister Anne, Peter III., who, like herself was coarse and base and equally unsuited to govern. His marriage proved infelicitous, but provided him a Queen, chosen for him by Frederick the Great, who afterwards ruled as Catherine II., a remarkable and able woman.

Peter III.'s father was the Duke of Holstein, hence the son, more German than Russian, and an ardent admirer of Frederick the Great, astonished Europe by suddenly making peace with Prussia, and by renouncing the Russian conquests, which action, however, proved partially judicious, as the gain was inconsiderable and the drain of money and men tremendous.

One beneficient act this Tsar performed, that of opening the prisons and recalling the exiles, many of whom had lived in dungeons or in huts for 25 years, and like wraiths of their former selves had they become. Biren and Munich, now aged men, the foreign favorites of Elizabeth, were again invited to Court and obliged to don royal trappings, which ill befit their gaunt and wasted bodies.

Peter III. lived in almost perpetual intoxication, which enfeebled his already weak mind. Restless and irritable and "military mad," he demanded the incessant noise of cannon and once demanded that 100 pieces be fired at one time.

In tyrannical spirit he decreed that all church property be confiscated and attached to the crown. This naturally inflamed the populace, who forced his abdication, chiefly at the instigation of his wife, Catherine, who won over the soldiery by visiting their barracks in person and in the march against the Tsar she headed the troops to the very Palace gates. Without resistance the deposed monarch signed his abdication, but on the eve of quitting Russia for his ancestral Holstein, he suddenly died, under suspicion of violence.

The conspirators proclaimed Catherine II. the lawful ruler and to make sure of no interference, murdered the young Prince Ivan, who had been incarcerated since infancy at Schlusseburg. Catherine's own son Paul, a weakling whom she treated with greatest aversion, was also safeguarded in a fortress.

With firm and imperious hand, this usurping Empress, grasped the sceptre, and like her over-weening husband, continued the resumption of ecclesiastical lands. The Russian Church, at this time, was fabulously wealthy, even as to-day, and immense territory and countless peasantry belonged to its monasteries. To appease the clergy, handsome stipends were assigned, but the Church became subordinate to the Crown, with the Czar at the head, for the old Patriarchate of Kiev and of Moscow had been long since abolished.

Catherine II., while a great ruler, was cruel and merciless, and in 1768 permitted one of the most terrible massacres which redden the pages of history, namely, the wholesale murder of the Jews by the Cossack soldiery.

Russia also had a share in the unjust partitions of Poland (1772 and 1793) and took all of White Russia (part beyond the Dnieper). She was led into this spoilation by the avaricious Frederick the Great, who divided the once proud kingdom between Prussia, Russia and Austria, and sent the deposed King Stanislaus to live in retirement at Grodno in Russia. The Polish patriot of this period, Koscinszko, was tortured and imprisoned while the Polish traitor, Felix Potocki, whose name is execrate, sold himself to foreign bidders.

In 1771 old scores were renewed with the Turks, which resulted disastrously for them, since they had to cede Azov (and later the Crimea, 1783) to Russia, and thus were they driven from the northern shore of the Black Sea.

On account of Russia's vastness and its scattered and ignorant population, we learned in the case of Ivan IV.'s son, how easy it was for a pretender to gain adherents. Hence in 1773 another such arose, Pugachev, a Don Cossack, who claimed to be the deposed Peter III. He aroused a peasants' insurrection, which brought frightful pillage and slaughter, but after a desperate conflict, the impos-

ter was taken to Moscow in a cage and there executed, 1775.

To stamp out all elements of this rebellion, Catherine II. put an end to the Cossack military republic or seck, but retained them as a personal bodyguard, which office they hold unto this day. She also caused a revision of the Russian code of law, but it in no way bettered the condition of the serf.

Always fond of show and homage, this powerful Czarina set out in 1787 on her memorable journey to the Crimea, taking her grandsons Alexander and Constantine, but the latter falling ill was left by the way. Potemkin, her vain and extravagant favorite, planned the royal progress, which was gorgeous in the extreme. On his death his Queen-mistress gave him burial with utmost pomp, but later the Czar Paul, who loathed him as a minion, orderd the coffin thrust into an obscure corner.

Meantime Sweden, the erstwhile greater power than Russia, became jealous of the growing strength of her rival, consequently the foolish and boastful Gustavus III. declared war, which proved his undoing, as he was soon forced to sue for peace, which required that he cede certain Baltic provinces. So unpopular did he become that his life was taken by an assassin's hand at a masked ball, 1792.

Shortly before Catherine II.'s death, a most valuable acquisition was made by Courland on the Baltic definitely uniting with Russia. Livonia and Esthonia had already been acquired by Peter the Great, hence Russia's Baltic provinces of Finns and Letts were considerably increased. She gained on the Black Sea also and rebuilt certain squalid Turkish villages into the splendid ports of Odessa and Sebastapol.

Catherine II.'s life and death bore similar features to those of Elizabeth of England. Both were women of force and intellect, but lacked nothing in feminine foibles. Both were patrons of the Arts and Letters of their time, in each case, a Golden Age, and Catherine was herself a writer of no mean merit. Both advanced their countries to a sure recognition as first rate European Powers. And both died in pitiful misery of soul, writhing on the floor of their bed chambers. Alas! for the frailty of human greatness!

In spite of this mighty Queen's unnatural dislike for her only child Paul, now a man of 42, he succeeded her (1796-1801) and performed as his first act, the removal of his father's body from the old Nevski monastery to the royal vaults in Petrograd, where since Peter the Great the Tsars of all the Russias have been buried. Orof and the other supposed assassins of Peter III. were forced to follow the exhumed body in the impressive cortege and were then banished for life to Siberia.

Paul who, no doubt, was weak-minded, alternated between deeds of excessive generosity and capricious tyranny to such an extent that his fantastic vagaries incensed his subjects. Being sensitive about his ugliness, he changed his portrait on the coinage to that of the double headed eagle, used ever since. Through hatred of Napoleon he joined the coalition powers against France and assisted Louis XVIII. by furnishing him an asylum at Mittau. Under the able generalship of Suvorov, the Russians performed marvellous feats of arms, and penetrating narrow mountain defiles, gave battle to the French in the high Alps. Travellers over the Grimsel Pass will see these fierce struggles commemorated in an eloquent inscription on the adamantine walls of the snow clad Swiss mountains.

The eccentric and fickle Paul, feeling himself slighted by England and Austria, completely turned tail and joined forces with Napoleon, whose skilful diplomacy caused all Russian prisoners to be sent home newly clothed and armed. Paul immediately ordered Louis XVIII. to quit Mittau, and in conjunction with Napoleon's forces drew up an elaborate plan for invading India, but this mad scheme came to naught by his assassination March 23, 1801. Napoleon was base enough to insinuate that the English had done the murderous deed, but in reality it was performed by Russian nobles, who feared for their country on account of Paul's capricious foreign policy. Originally their purpose was to simply force his abdication, but the excitement of the conspirators led to his being strangled. His

widowed Empress, Maria of Wurtemburg, survived until 1828. Among their children were Alexander (afterwards Tsar), Constantine, Viceroy of Poland; Nicholas (Tsar), Alexandrina, wife of King of Hungary, Maria, wife of Duke of Saxe-Weimar; Catherine, wife of King of Wurtemburg; Anne, wife of William II. of Holland.

Alexander I. (1801-1825) at once made peace with England and France, but the aggressions of Napoleon caused him to form a third coalition, 1804, against the great War Lord of Europe. Prussia joined in this, and then was it that Alexander had his famous interview with King Frederick William beside the tomb of Frederick the Great in Potsdam. Europe became embroiled again, and battle followed battle. At Austerlitz, in Moravia, 1805, Napoleon was victorious, but his success was slightly effected by Nelson's victory at Trafalgar. Next followed the battle of Jena, 1806; Eylau, 1807, and Friedland, June 14, 1807. At the last named Russia's losses were tremendous, so, after an interview between Napoleon and Alexander on a raft in River Lieman, the treaty of Tilsit was decided, July 7, 1807. By this treaty Russia fared fairly well, and incorporated still more of Poland, but she hated Napoleon's continental system, which, among other things, excluded English goods from her ports.

During the storm and stress of Napoleon's days, Russia was also expending military force on the ancient Kingdom of Georgia, between the Black and the Caspian Seas. This little country, in its checkered history, had frequently sought Russia's protection against aggressive Persia. Finally in 1799 its native King surrendered his kingdom to Russia.

In 1819 Sweden did the same with Finland and East Bothnia, which became incorporated into the Russian Empire, with the provision that Finland retain its own Diet and army, which it does to this day.

Meantime relations between Alexander and Napoleon cooled on account of the latter's intrigues with the Poles and his imperious demand that Russia sustain the Continental blockade against England. War became imminent, and on May 9, 1812, Napoleon quitted St. Cloud on his memorable Russian expedition, which caused his sun to set. Little did he dream that reverses would follow and that amid the icy snows of Russia his grand army would perish in a straggling retreat. His rude occupancy of Moscow was ignominious and brief, for under command of the brave Governor, Count Rostopchin, the ancient capital was set on fire rather than resign to the insolent conqueror. Trains of fugitives with their "little all" mournfully marched from the city for days previous, and from adjacent hills looked back upon their burning homes. The haughty war lord then entered and lingered five weeks among the smoking ruins, executing and torturing the courageous inhabitants, who tried as best they could to resist the invaders' barbarities.

Finally, through starvation, the remnant of the grand army of Napoleon the First slowly defiled from the ruined city and began their sorrowful and fatal retreat. Emaciated and frozen and broken into scattered corps, they perished amid the blinding snows of an alien land. The severities of this particular winter are described thus: "The wind cut like a razor and hardened the snow into icy crystals, which whizzed through the air like shot. The atmosphere was rarified until it seemed crisp and brittle and the biting blasts penetrated to the very vitals of the weakened soldiers, so that thousands dropped by the way or became mad and leaped into the bivouac fires." Not more than 80,000 out of an invading host of 680,000 ever returned to La Belle France. Between Moscow and Vilna alone 300,000 corpses strewed the road.

Napoleon quitted his army and hurried back to Paris, incognito, leaving Marshal Ney, who had been scorched and blackened in burning Moscow, to bring back the broken and decimated battalions of the once great army.

(Concluded next month down to present (Czar.)

CANADIAN POETS

XXVI

ARTHUR BOURINOT

The name Bourinot stands for a good deal in Canadian letters, and it is gratifying to observe that the mantle of a gifted father gives promise, in this little volume of poems, of worthily descending to a literary son. . . . . There is a good deal of promise in 'Laurentian Lyrics and Other Poems.' The meaning throughout the poems is at least always clear, which cannot, by the way, be said of a good deal of the poetry of our day. There is also no straining after effect. Nor is the poet's thought banal. The poetic conception is, however, yet lacking in that strength which comes from a higher vision and deeper realization of life, for as yet, using the words of Tennyson 'Sorrow has not ruled our author's life.' Divine dissatisfaction and suffering are the altar stairs whereby genius develops and bears goodly fruit.—Toronto Globe.

The sonnet 'To the Memory of Rupert Brooke' is an admirable piece of work.—Literary Digest.

There is a delicacy and fragrance about them; they breathe the love of nature's wide spaces.—Toronto Telegram.

THE FIRST YEAR of this century I published for private distribution, a slim book of my own verse, and sent a copy with my compliments to Sir John Bourinot, K.C. M.G., Clerk of the Canadian House of Commons and an author of repute. He took the trouble to send me promptly, in his own handwriting, an appreciation so encouraging that it had a distinct influence on my future literary work. It is now my privilege to attempt

to do for his youngest son, what he so sympathetically did for me.

Mr. Arthur Stanley Bourinot, B.A., was born in Ottawa, Oct. 3rd, 1893. Both parents were native Canadians, his mother, Isabella Cameron, being a daughter of the late John Cameron of Toronto. His education was received in the Public School, the Ottawa Collegiate Institute, and the University of Toronto, from which he graduated in 1915.

After graduation he became a Civil Servant in the Department of Indian Affairs at Ottawa, but in a few months was granted leave of absence to accept a commission as Lieutenant in the 77th Overseas Battalion, C.E.F.

Lady Bourinot resided in Toronto during her son's university course, but shortly after returned to Ottawa.

In reply to a question or two, he writes:

Never went in much for sports but always did a lot of walking. Spent most of my summers camping at Kingsmere in the Laurentians, from where I got the title of my book.

Mr. Bourinot's first book of verse, "Laurentian Lyrics and Other Poems," came from the presses of the Copp, Clark Company, Limited, in December of 1915. It contains but twenty-four short lyrics —not much in quantity—but the quality is that of a true singer, piping his first notes with a sure instinct and with the joy of creation.

THE WORLD AWAKES

The world wakes from her sleep;
The soft, sweet coverlet of white
Slips down her breast, to creep
Where morning mists, as light
As visions, cloud the sea,
And leaves her naked, land and tree.

The Southern wind's warm sigh
Arouses life, and at the dawn
The birds, with joyous cry,
Sweep past and on and on;
Love stirs to touch the earth
With flowers, dreams and all new birth.

GYPSY APRIL

Gypsy April
Came a-straying
Swiftly o'er the fields and hills;
Gypsy April
Came a-maying,
Racing with the running rills.

Gypsy April
Kissed the tulips,
Till they flushed a crimson flame;
Gypsy April
Touched her red lips
With the flowers as she came.

Gypsy April
Came a-straying,
Tripping shod with sandals white;
Gypsy April
Came a-maying,
With low laughter of delight.

ABSENCE

I cannot rest,
For the swallow's flying,
And blue-birds with saffroned breasts
Blue the lea;
How can I rest?
Earth with night is lying,
And the white star o' the west
Guides to Thee.

I cannot stay
While the winds are calling
And the wild, white horses play
O'er the sea;
How can I stay
With the red leaves falling,
And ways in their windings stray
But to Thee?

LAURENTIAN ROADS

Sweet are the paths that the traveller treads,
O'er the Laurentian Hills,
With a song in his heart the warm wind weds,
Life to live as he wills.

Cool are the meadows by the winding ways,
Where Bob-O-Links take flight,
And the uplands allure the sun's last rays,
The Northern lights by night.

Dark i' the dusk when the night stills the wings,
The white moths flutter by,
And under the stars the wayfarer sings
Roving the hills on high.

White are the ways o' the wanderer's home,
Hush where the tired heart stills;
Oh, I will return o'er the roads to roam
Through the Laurentian Hills!

STAR O' THE WEST

Star O' the West, White Star O' the West,
Light of the ev'ning sky,
Brighten the dark of the old hill's breast,
Rise, for my love is nigh.

Star O' the West, White Star O' the West,
Lamp of the crimson eve,
Light the little bird safe to her nest,
Come, ere my love must leave.

Star O' the West, White Star O' the West,
Donor of sleep and dreams,
Shine o'er my love while her tired eyes rest,
Glow till the daylight gleams.

A FLOWER IN THE CITY STREET

I found a flower in the city street,
Crumpled and crushed it lay,
Trodden down by the careless feet
Of all who passed that way.

Its color was not o' the fairy green,
Grey was its gypsy face,
But still it wore a wisp o' sheen
The world could not efface.

It fell like a gem from a woman's breast,
Loosed like a frightened thing,
And I recalled the haunting rest,
Of meadows in the spring.

I found a flower in the city street,
With red heart crushed to grey,
And life to me seemed sweet, so sweet,
Bright as the break of day.

THE HARVEST WIND

Last night the wind swept swiftly o'er the fields,
Where late the wheat swayed golden in the sun,
And where no more the singing reaper wields
His scythe, for now the harvest toil is done.

The wind stole quietly, but with chilling breath,
And voice as seeking, seeking without end,
And low, its murmur said, "I bring not Death
But only sleep, the lover and the friend."

The wind swept past and onward o'er the hills,
With restless pace, unwearying in its quest,
And in my heart I felt the fear that stills,
For swift I heard its beating in my breast.

The whispering of strange voices filled the night;
I dreamed the dead were drifting on the wind,
Returning to their land with hastening flight;
And still I hear the words the wind's voice dinned.

TO THE MEMORY OF RUPERT BROOKE

He loved to live his life with laughing lips,
And ever with gold sunlight on his eyes,
To dream on flowered uplands as they rise,
O'er which the moon like burnished metal slips;

To hear the gypsy song in sails of ships.
And wander o'er the waves 'neath azure skies.
Seeing the splendor of tired day which dies
And into lone oblivion slowly dips.

But suddenly his country clashed in arms,
And peace was crushed and trampled like pale bloom,
Beneath the careless feet of man and beast,—
The world was turmoil, stirred from west to east.
And song and gladness had no longer room,
For drum and bugle called with loud alarms.

REVEILLE

Slowly the sun rose like a ball of flame,
Above the hills, hid in a mist of dream.
And from the rows of round, white tents there came
The murmur of men's voices through the gleam
Of dawn, and then across the morning air
Swept the shrill bugle's warning, waking sound,
Drowning the dreams of men with clarion blare.
And ush'ring them again into life's round
Of preparation for great Freedom's cause,
For which their hearts and strength are steeled and strong;
All eager to uphold down-trodden laws,
E'er rising to their tasks with laugh and song,
And willing if the need should ever be,
To give their lives, their all for Liberty.

RETURNING

I came once more 'midst the Laurentian Hills,
Where love and I with laughter used to stray,
And wandered o'er green uplands where life stills
And fauns and fairies dance at dying day.
The pallid trilliums nodded fast asleep,
With pale, white faces peering through the gloom;
A sweet and subtle incense seemed to creep

Across the silence of the world's broad room
And breath o' dusk was sweet in lilac time
And dark, brown throated birds burst forth in song,
While through the valley rang the evening chime,
And little stars flowered the skies ere long;
Dreaming, I trod the shadowed, dusty way;
Alas, with dawn, my dreams were dimmed and grey.

REALIZATION

I did not know that first time that we met,
That in you I should find my life's ideal,
And that my heart should ever after feel
No sorrow in your presence, no regret;
For in the past I ever loved to let
Mine eyes find their delight where eagles wheel
Above the cliffs, seeing the slow night steal
From deep, abysmal caverns dewy wet.

I loved the sun, the stars which strew the floor
Of night, the sweetness of gold summer fields,
And incense which the twining wild flow'r yields,
Till dreaming on the lintel of love's door,
I saw thee with thy down-fallen hair so sweet,
And laid my love with longing at thy feet.

THE TROOP TRAIN

I heard the troop train rattling through the night
And lights of cars flared bright across the gloom,
While murmur of men's voices, out the womb
Of dark, was born, with songs of coming flight;
And slowly then as fades the day's last light,
Or drowsy music dies in vaulted room,
The noise grew dim and crept into night's tomb,
And utter silence fell like evil blight.

The silence of the heart when life has fled,
Or quietness of deep lull before the storm
When leaves are still and all the world seems dead,
Wrapped its mantle around the city's form.
And then, like Echo's answering voice forlorn,
I heard the train as far away it sped.

Art and Artists in Canada

I SHALL always believe that Jessie Alexander could tell us more about the life of rural Ontario—its real humors and tragedies and hopes and fears—than many a so-called historian. For has she not amused and inspired, consoled and delighted, hundreds of audiences the year round in every hamlet and cross road, in little district school houses, as well as in the big Town Halls, and of late, the Opera Houses that are dotted all over this and other Provinces? Has she not partaken of the fatted calf, learned the family secrets, listened to stealthy ambitions, glimpsed the family skeleton for lo, these many years?

That is what I call getting into the heart of the people and becoming one with their life. It is far more important to me from the standpoint of work than the times when Jessie Alexander has recited Shakespeare and Shelley before enormous Canadian or American audiences, or passed on her art in lessons to such a famous pupil as Margaret Anglin.

Miss Anglin has gone the way of other successful artists and made her triumph among "the best people" in the centres of art. Miss Alexander has laughed and sung, dimpled and warmed her way into the very heart and soul of her fellow-countrymen. They can no more do without her than they can do without the sun for harvesting, or the soft snow that covers their fields with safety and promise in the winter.

JESSIE ALEXANDER

To draw a sketch of Jessie Alexander's life with anything like fidelity would be to cram it with detail. A career which covers over twenty years of public life, interspersed with travel and always indented with study, must needs run into many curves, but taking the bold outline I should say that Miss Alexander's first public entertaining probably occurred at the age of three, when a motherly Scotch Sunday school teacher enquired if the little girl "could say a wee verse?" And the youthful Jessie blithely responded with sustained dramatic effect in those

highly moral lines beginning—

"Solomon Grundy was born on Monday,
Christened on Tuesday, etc., etc."

I believe that the recital lasted for some time and was instant in its success!

Perhaps the secret of the whole matter is that Jessie Alexander has inherited a love of the people. That is one of the most beautiful of birthrights. It is the quality without which no man or woman, however talented, can become a part of national or community life or art. In this case it probably came out of the combined "Scotchness," in the best sense, of her mother, and the highly dramatic instinct of her father, who was known as an excellent amateur actor in Glasgow and "the best Bailley Nicholas Jarvie on the stage."

"I have always worked," she says, "ever since the childhood days of breathing exercises, and so on, with my brother who understood these things." Then in New York she laid the foundation for the days to come in the diligent and inspiring study with Professor Charles Roberts of the Union Theological Seminary, the well-known teacher and interpreter of literature, to whom she was afterwards married.

Possessed of an expressive and thoroughly well trained voice, keen dramatic instinct, a radiant personality, and above and beyond all this "love of the people" the way to success was short.

Twenty years ago the Canadian public outside of Montreal, Toronto and possibly Halifax had to be content with the mere shreds and tatters of literature so-called, on the ordinary concert programme.

This concert programme was usually composed of three "star" performers—imported—with a substantial bolstering of local talent to eke out the programme, so as to get the full value of the quarter or fifty cents expended. The "singer" was supposed to be the most delicate and refined feature of the entertainment, he or she signified the classic touch. The "comic," and he was mighty with the audience, supplied the humorous element which drew the crowd, and the dramatic end was left to the "elocutionist," who swung vigorously with the curfew bell, or held the gates with Horatio, or declaimed the quality of mercy with a right good will.

Jessie Alexander came into the arena with new things in platform literature, and new thoughts. She read James Whitcombe Riley, and Kate Douglas Wiggin, and J. M. Barrie, and Kipling long before these writers were generally known, and she read Shakespeare and Shelley, too, but she never "elocuted," except just enough, once in a long while, to keep them respectful. Instead she seemed to them — those hard-worked, prosaic and sensible Ontario audiences — to be turning over some pages of life, real life that entered into and was part of theirs, but life into which a little gleam had slipped and went sliding down from that palm-bedecked, plush-bechaired platform into all the nooks and crannies of the every-day life of fireside, or field, or shop, or schoolroom.

Of course there have been many excursions into what the world would call "a wider sphere." Critical American audiences have enjoyed and often recalled Jessie Alexander, and I have myself seen a list of Duchesses and such who have delighted in her work in their own inaccessible London drawing-rooms or at club affairs in that same London. And she has been welcomed back to California, where she lived her brief married life, by splendid audiences, the journey back to Toronto through the many growing cities of the Canadian West being a series of interesting return engagements.

Then the summers have meant exploration and the gathering of new material abroad. I saw once the scrap of a letter that was most characteristic. "Here I am in Kirriemuir, at home at last. This is my mother's land. It is also mine. There is something in me that responds to all I see and hear. The very air thrills me. In October I shall give some scenes from "A Window in Thrums" and other sketches made real to me by my visit to the scenes connected therewith."

Indeed many of the most popular selections she gives are bits of actual life, observed, written out, and then given to the people by this friend of theirs out of her own experience. I think that is largely the secret of her lasting quality—every year a new repertoire, or rather as nearly

new as audiences will allow, for they clamor for old favorites, that and a fastidious and insistent selection of those authors whose work is sincere and human.

"Truth is the key to all nobility in literature," says Miss Alexander, "to be really human a scene or poem must be deeply and inherently true. That quality carries in the end far beyond epigramatic smartness, mere 'poesy' or style. The things I read in public must be true to the best in human life."

I asked her what she recalled as the most interesting incident in her career. She remembered several. Once when that good merchant-prince, Timothy Eaton, had a great hall at the top of his warehouse cleared out, and before five thousand of the employes, whom Mr. Eaton characteristically called "my dear colleagues," Miss Alexander read her own famous "Bargain Day."

"That was a proper setting!" she declared with much joy in the recollection.

"Another memory is, I think, the most thrilling of any in connection with my career," she continued. "Those days of the Boer war when each Saturday night they put on popular concerts in Massey Hall and would throw the pictures of the manoeuvres and the Generals and the soldiers across the screen behind and above the stage, and there was much martial music and singing. I used to recite Kipling, and it seemed to me as though I was a sort of magnetic centre receiving and giving back great waves of vibratory feeling from those immense and much-moved audiences. It was marvellous."

Then in an intense little cockney voice, for all the world like an earnest Tommy Atkins, she began to recite for me,

There's a little red-faced man named Bobs.

But the best story of all that Miss Alexander told me was about another and most wonderful time when she voiced that line again on a telegram to her husband when their son was one hour old:

There's a little red-faced man named Bobs.

"That line means something to me!" she laughed.

Indeed it seems to me that every line uttered has really meant so much to this artist that literature itself has come to express more to the people to whom she had read. Not only the bits of so-called classicism but, as well that dear, near, human comedy that is not caricature or buffoonery, but expresses an exceedingly sane mood of human nature—the smile on the lips of life that we all need to woo more frequently, especially in times of stress.

And, after all, the best tribute, the one that in its essence truly describes this woman who is more universally beloved today than any other public entertainer in Canada, is one that came long ago from an old Scotch body in some country audience who turned to her companion, after one of "Jessie's" characteristic sketches and said, "That takes the cobwebs aff ma heart."

* * *

At their first professional recital in Toronto, two sisters, Miss Olive and Miss Marjory Brush, played and sang, at the Conservatory of Music on the evening of March 29th, in aid of the Women's Auxiliary of the 97th American Legion, C.E.F.

Miss Olive Brush, who is a pupil of Mr. Vigo Kihl, is a young pianist of much ability. Her technique is very smooth and she has a sense of rhythm, which makes her reading of a varied programme, including Beethoven, Chopin, Schubert, Brahms and Schumann intellectually satisfying.

Miss Marjory Brush has a particularly charming light soprano voice, perfectly placed, while her clear enunciation and freedom from all affectation is refreshing. Her programme, from old fashioned English and one Welsh ballad, through two quaint chansons by Weberlin, the ultra-modern music of Debussy and Charpentier, to a group of usual modern concert ballads, showed an evenness and facility that is rare in such a young singer.

* * *

The Academy String quartette closed its present season with a programme that was a rare delight to music lovers. Never has the Quartette been heard to better advantage than in the quaint humor of the Haydn G. minor op. 74 No. 3, a delightful novelty in a Dvorak Terzetto in C major, op. 74 (a combination of two violins and viola very rarely employed),

and to conclude the beautiful and whimsical A Major, op. 18, No. 5, of Beethoven, "dainty transparency," as Mr. Von Kunits calls it, leading to the finale: "An amiable chat, at times becoming more animated, and now and then continued in a delightful whisper."

The charm of this organization lies in its exquisite tone quality and delightful abandon to the spirit of the work portrayed. As the 'cellist, Mr. George A. Bruce is in khaki, the chances are that next season the personnel will be changed to some extent.

* * *

One of the most charming of comedies was enacted last week at the Royal Alexandra, when Mr. E. H. Sothern gave a play by Alfred Sutro, called "The Two Virtues."

It may be typical of this perhaps too generous age that of the two virtues, chastity and charity, we undoubtedly love the latter best. Indeed one sometimes wonders if the "catty" woman was ever really the vogue, as we are led to believe was the case in those early Victorian days, when no Lady of True Refinement ever knew what a spade was—much less called a spade a spade!

The Lady of True Refinement evidently stage loves to exploit, along with the fe- had her day, however, and then slowly faded into that type which the modern male detective, the pure but erring woman and the excellent bachelor girl—we mean the ordinary or garden variety of Cat.

Mr. Sutro shows us an advanced variety of cat in Lady Milligan, bent on the salvation of her brother from the hands of one Mrs. Guilford (Mr. Guilford quite unknown!) who possesses all the charm and fascination of which Lady Milligan is innocent. Mr. Sothern, as the brother, an "eccentric" literary man who hides behind a pose to escape bores, and like the rest of humanity loves a fascinating woman when she is discoverable among a throng of usual femininity, is very delightful and at times convincing—though not all the time.

What the play goes to prove (as far as a good play ever tries to prove anything) is that it is really more noble to be beautiful than good, and never more noble to be bad than beautiful. In fact that beauty—all by itself—implies a good deal.

In using "The Two Virtues" as his medium of farewell before retiring from the stage Mr. Sothern has left his many admirers with a very sympathetic smile in his direction, mingled with their regret.

There is cause for general congratulation that the season was not to close without one concert by the Toronto Symphony Orchestra under the baton of Mr. Frank S. Welsman. The performance on April 27th in Massey Hall was a genuine treat, and hearing the programme (aware, too, of the fact that there had been only a few rehearsals, after a silence of over two years) one was struck anew by the freshness and enthusiasm of the players. Perhaps they were glad to work together again, perhaps because war had thinned their numbers, those that remained were all the more eager to give freely—at anyrate one has not heard a more spirited rendering of the Tschaikovski concerto for Pianoforte No. 1, in B flat minor (op. 23), in which Mr. Ernest Seitz, the young Canadian pianist, also did himself proud, or a more sympathetic rendering of the 2nd and 3rd movements of the famous "Pathetique."

In fact it was a Tschaikovski evening, concluding with the "1812" overture in which the Russians celebrated the retreat of Napoleon from Moscow. The other numbers comprised the Overture to "The Merry Wives of Windsor" and the Peer Gynt Suite by Grieg. It is to be strongly hoped that next season will see the orchestra at work again. We need it very badly for the preservation of the musical health of this city.

PUBLIC WELFARE

THE FACE OF GOD

Love blossomed by the brooks in valleys vernal.
The lilies were His care;
He hid within the acorn's tiny kernel
And lordly oaks were there;
In human flesh, and lo, a Son Eternal
The life of Love to share.

The soul is guest in the house of life, and circumstances are the house and its furniture. All the substance, power, and harmony of nature—matter, energy, law—are at the disposal of the obedient heart, for Soul and circumstance make up the universe. Nature is a materialization of Spirit, the outward showing of the Infinite Beauty, a thin veil over the face of God.

Individual souls are embodiments of universal life. We are all God's children. How can we lose ourselves where all is home?

Nature never forgets her own laws. She sings always and ever her own music. The great social laws are as truly universal as are gravitation and etheric vibration. There is a brother or a sister in every human transaction.

In God's books, all accounts balance. In nature's ledger, the receipts always offset the outlay, the reward is commensurate with the service. Each soul writes, in its own conduct, on the white pages of the passing years, the estimate of its own worth, and neither God nor man ever questions the entry. When we receive favors, we give hostages for their return, and the forfeit always cancels the delinquency. Nature has ten thousand ways of exacting her claims. When we seem to have gotten the best of the bargain, we have forfeited invariably a part of our freedom, or even of our self-respect.

Love's way is best. Our best is always beautiful, but if it is not Love's best it is not ours. Our little schemes are ludicrous before the Infinite Law.

If, with passion for the will of God, we would strike the pace He sets; if, through the mists of time, we should feel, even dimly, the pulse-beats of the Eternal Heart, how many divine forces, exhaustlessly kind, would be set free, even in us!

If we sail, let us ride in Love's currents, before His gales of omnipotent joy. If we walk, let us stay in His paths, always breathing atmospheres of light, and beholding the face of God.—Albert D. Watson.

THE LOT OF THE INNOCENT BY-STANDER IN WAR*

By THOMAS W. JACKSON, M.D., Late Captain and Assistant Surgeon, U.S.V.; Late Member of the American Red Cross Sanitary Commission to Serbia.

I WILLINGLY consent to recite some of my impressions gathered in Serbia during the spring, summer and autumn of 1915, in the hope that they may be of some interest or that they may prove indirectly helpful to the readers of the Military Surgeon.

"The Lot of the Innocent Bystander in War" was suggested to me as a topic and I accept it with the understanding that the innocent bystanders are the women, children, aged and non-combatant persons of the warring countries and with the understanding that my theme is really "The Effect of War in the Development of Disease among the Civil Population."

With the miseries and afflictions which have come upon at least four European countries through war during the past twenty months the public is only too familiar through repeated recital, but of the realities of these miseries none but eye-witnesses can form adequate opinions.

Pen pictures of Belgium, Poland, Serbia and Armenia have been drawn by master artists and have been potent in abstracting millions of American dollars from American pockets, and will, I hope, continue to do so until the utmost need to which we can minister has been met. It is not primarily to describe these miseries further that I have undertaken this paper. Rather, I desire to set forth, as I see it, something of the manner in which war produces them.

To classify the effects of war in groups, such as direct and indirect effects, immediate and remote effects, is neither easy nor satisfactory; nor can one group them solely according to the lapse of time, as the chronological order does not wholly satisfy us. Some effects are really accompaniments and some are consequences.

Days, weeks and months will serve to measure the passage of misery, but will not furnish a perfect classification for war's effects. And so I think I must permit you, yourselves, to group these war effects—as may seem most logical to you—in their relation to disease incidence.

Nutritional Effects.—Mal-nutrition is the inevitable result of food shortage; the food shortage being the invariable and universal effect of war and requiring no explanation or exemplification. Whether it be an immediate result of war or a late effect depends upon circumstances of preparedness, distribution, conservation and reproduction in the matter of foodstuffs. As a result of mal-nutrition, we have inanition—starvation, relative or actual. Manifestly the very persons upon whom mal-nutrition bears most heavily in

*Reprinted from the Military Surgeon.

war-stricken countries are those of the non-combatant class—its infants, its aged, its crippled and its defectives generally—the innocent bystanders. The nursing mother, herself half nourished, produces unfitting pabulum for her baby and both go down in starvation.

In its appeal for aid, the National American Committee, speaking of Poland, says: "The concentrated horror of it all is in the suffering, physical and mental, of those lonely starving mothers, maddened by terror and pain, driven hither and thither in what once was the home-land—now charred and ruined."

Paderewski, speaking for his native Poland, states that: "Fully eleven millions of helpless women and children, peasants, workmen, the very essence and strength of the nation, have been driven into the open. Thousands are hiding among the ruins, in woods or in hollows, subsisting on roots and the bark of trees. Hundreds of thousands of once prosperous families are helpless, hungry, sick and succumbing. Only a great wave of mankind's pity can surmount so immense a wave of human misery."

Falling back upon my own observations in Serbia, I must say that I saw no actual widespread starvation; but I had abundant evidence to convince me that an actual food shortage had existed in the preceding months and that under circumstances of invasion (which have since developed) it must again become an actual condition and, moreover, that its extreme manifestation—starvation—must result.

All of this has since come to pass and there are many Serbians starving to-day. Even in the favorable days when I saw them—favorable only because of summer or harvest time and the temporary military quietude which prevailed—there were places where "near-starvation" (to coin a term) and extreme poverty were manifest; Monastir, for example. There were also plenty of individual cases of near-starvation everywhere, especially among the babies. These cases came to our attention constantly. Beggars were numerous, and among the impoverished Turkish class some persons were doubtless starving. These remarks, of course, do not apply to the military population, as they were adequately though frugally fed at this time.

Just here I must mention the factor of distribution, and will cite an illustration of effects of war upon food gathering. On the great Kossova plain, near the town of Pristina, late in July, 1915, I saw great fields of over-ripe, unharvested wheat, the grains falling to the ground from over-ripeness and destined to be lost as food. This wheat had been awaiting the sickle for weeks—the grain harvest season in Macedonia being some weeks in advance of our own harvest season. The sole harvesters were the Serbian women, as the male population was absent in military service and the Turks who remained in their homes would not work, the season being that of "Ramadan." Here was food for the gathering and close at hand was starvation. I have no doubt that hundreds of such cases might be cited from the warring countries, particularly those where organization was neglected and where invasion had upset all precalculated plans. Distribution involves transportation and is an all-important factor in the prevention of starvation among the civil population in war times.

I have also been privileged to see the effects of military reconcentration of the civil population in war time in Cuba and the Philippine Islands, and I think that there was more evidence of relative starvation among the children of Cuba than in Serbia or the Philippines. In the Philippines, it must be remembered, the concentration was administered by Americans, and every possible precaution to prevent starvation was carefully carried out. Considering the more bounteous character of the tropical climate and the ease with which life-sustaining food is produced or gathered in Cuba, it seems to me that we

may attribute this difference to higher economic efficiency among the Serbians. Indeed, there can be no doubt of this superiority nor of their frugality.

Housing Effects.—Let us next consider the effects of altered housing conditions. The situation in Serbia will serve to illustrate many of the effects of war upon the housing of the civil population. Two invasions of north Serbia by the Austrians had practically driven the population from the northern country into middle and south Serbia (Serbian Macedonia or new Serbia). After the expulsion of the Austrians they returned slowly or not at all, either from fear or from inability to transport themselves, as well as from inability to secure food for subsistence in their old homes; so that in the spring and summer of 1915 the housing capacity of middle Serbia, and particularly of south Siberia, was greatly overtaxed. It had been even more overtaxed in the winter months preceding; and this overcrowding had doubtless played an important part in the incidence of typhus among the civilian populace. Cities in the south doubled in population, whereas Belgrade, in the north, normally the home of 120,000 people, was housing about 30,000 at a liberal estimate. In September, 1915, before the invasion which has just been completed, the streets of certain parts of Belgrade were literally grass-grown, as I can testify from personal observation. Whole city squares, in that portion of the city nearest to the Save River and exposed to Austrian guns, were vacant save for an occasional householder who braved the daily danger of bombardment. Uncurtained windows permitted one to view the interior of houses whose domestic routine had been interrupted in much the same sudden manner in which Pompeian domestic life was interrupted. Indeed, a Belgrade woman who had fled from her home and remained in the south through fear, or inability to return, compared this deserted city of Belgrade to the silent streets of Pompeii.

Here, then, we have one of the effects of war and invasion upon housing conditions.

The effect of actual destruction of houses by bombardment and fire is also to be considered; but as the civil population usually flees before these occurrences the effect is the one just noted, namely, a tremendous tax upon the housing capacity of the localities into which the people retreat. In the case of the last Serbian invasion, by Germany, Austria and Bulgaria, which was undertaken from three sides and relentlessly carried out, the effect was literally to drive out of doors hundreds of thousands of people, infants and aged. In the face of a bitter winter climate the inevitable result was death, not only from starvation, but from exposure and frost-bite. Overcrowding is bad; but to be roofless, defeated, hungry and frozen is the culminating bitterness of the innocent bystander's lot.

Contagion Effects.—The matter of increased opportunity for contagion (through contact) bears a definite relation to the altered housing conditions of war and the overcrowding effects of civilian retreat which I have just described.

It goes without saying that there is more exposure through cotnact when three people sleep in one bed—or when the bed is occupied by relays of two or three persons, running two or more shifts in twenty-four hours—than when the normal number of one or two persons is accommodated during a night.

The same principle holds good when several persons are huddled together for warmth, in a barn, a straw-stack or in one of the grass huts or dug-outs which the Serbian peasants in Macedonia make use of; contagion through contact is rendered nearly certain under such conditions. As a matter of fact, scarlatina and diphtheria were extremely prevalent among the civilian population of the overcrowded parts of Serbia in 1915, and they took a large toll in life. The incidence of these diseases was far above the normal incidence in

peace times, as I happen to know from personal investigations made in connection with my duties. The same contact conditions and the conditions of clothing and filth, of which I shall speak next, afforded great opportunity for the direct communication of vermin and vermin-borne diseases, notably typhus (through the louse) and relapsing fever (through the bed bug); two extremely common diseases in civil as well as military life in Serbia in 1915. The scope of this paper does not include a discussion of typhus fever, the epidemic disease which in its most horrid and universal form took us to Serbia and was the principal object of our sanitary attack.

Clothing and Filth Effects.—I shall not discuss here the national customs with regard to clothing and human waste disposal in Serbia and the Balkans, much as these sanitary faults merit discussion and require correction. The evil effects of these matters of custom and costume are by no means limited to war time, although they must be increased in some degree by war conditions. In passing, I will repeat the impression which came to me in my daily contact with Serbs and Turks. After prolonged observation I concluded that, as a class, the Turk as compared with the Macedonian Serb is more cleanly in person and quite as cleanly in habits. In his house and in his mosque he practices personal cleanliness which the Macedonian peasant might well emulate. The religious requirements of the Moslem faith and practice, such as the removal of shoes and frequent ablutions, certainly beget a cleaner personal state than the practice of swathing the body from head to foot with innumerable woollen coverings which literally are not removed for months and which become veritable incubators for lice. This swathing of the feet and body, with the practice of sewing infants into their clothing for the season, absolutely prevent bathing and produce skin disease and vermin infestation. The devout Turk—and practically all are devout—must maintain a certain degree of cleanliness if he simply observes the rites of his religion.

With regard to human waste disposal, all parts of Macedonia, Turkish and Christian, seem to be equally benighted and guilty to a sickening degree.

It would distress me to convey the impression that all Serbs are as primitive as the peasant class described. Among Serbians, I have met many persons of the highest culture and education; men and women who are themselves scrupulous in all the details of cleanliness in daily life and ambitious for the betterment of their peasant countrymen. It is this class of persons—and the military class—who feel the effect of war in the matter of clothing and filth.

Retreats and migrations, limited and temporary housing accommodations, lack of money and servants, close contact with the peasantry, as well as actual absence of laundry facilities of even the crudest kind, all conspire to prevent the washing of garments and the personal bathing which is practiced in peace times and in their own homes.

Similarly, the best and most highly organized military forces, English, German and French, become unclean and vermin-infested in trench life through absolute inability to practice their habitual and natural cleanliness.

Immorality and Prostitution.—There is one effect of war upon the civilian class which I would gladly omit from consideration or mention, if it were possible to do so consistently. But like hunger, cold and death, this effect is a reality and may not be so dismissed.

It is a fact to be faced and considered.

In most of the countries of Europe now devastated by war and invasion —either in the cities held by invaders or in the towns of the hinterland, where civilians have fled for safety—there are thousands of women, penniless, unprotected, half-clad; separated from homes, fathers, husbands and brothers.

They know not whether these, their natural protectors, be alive or dead, imprisoned or wounded. Full well they know the chance that their bleaching

bones lie on foreign hillside, in trench or forest, or on the peaceful sands of the ocean's floor.

It would be useless to close our eyes to the fact that some of these women have been driven into prostitution from dire necessity. For them no opportunity for employment exists and gaunt starvation stares them in the face.

Why theorize or moralize in the presence of this calamity?

Under similar circumstances in the United States a similar state of affairs would arise.

Let opponents of the national prepared state, especially those with wives and sisters, take note of this, the inevitable effect of military invasion of helpless countries.

Miscellaneous Effects.—One might continue rather indefinitely in attempting to classify the effects of war upon the civil population, but it seems unnecessary to do so, and I therefore group some of the effects, as yet unmentioned, as "miscellaneous." Some of them plainly bear a relation to the groups I have already mentioned, sometimes fitting into two or more of them.

An effect of great consequence upon the civil population in Serbia was the absence, through the demands of the military service, of all the doctors of the country; a distressingly small number at best and lessened through death from typhus and war to a mere handful. The villages and towns were stripped of all medical practitioners and surgeons, with the result that there was literally no place for the sick and surgically needy members of the civil population to turn for aid; all hospitals—save a few where civilians sick with typhus were admitted—being reserved exclusively for the military sick and wounded.

With a view to relieving this state of affairs in a definite way in one important city in which we were carrying out our sanitary work, I addressed a communication to the American Red Cross in Washington, through the Director of the Sanitary Commission, on July 2, 1915. A certain large and finely equipped British Military Hospital was being relinquished and it was suggested by the British staff that the Americans should assume charge of it and conduct it along such lines as we might see fit. In my letter of July 2, I made the following statement which represented the feeling at the time among a large number of the American workers in Serbia. I said, "We are, I believe, in agreement in the view that one of the most urgent needs in this part of Serbia—perhaps the greatest need—is that of providing for the non-military population which includes the women and children. Under present conditions these unfortunates are absolutely uncared for when sick, and there is, in consequence, much distress. Owing to the predominance of military matters, inevitably necessary at this time, this suffering is quite lost sight of, or, at any rate, is quite unprovided for.

I conveyed the proposition made by the retiring British staff, with the consent of the Serbian military authorities, to the American Red Cross, but the communication never reached Washington. The proposal was a very important one and merely involved acceptance of administration and support by Americans, and was calculated to relieve the medical distress of a great number of people at the least possible expenditure. It was never carried out, the hospital reverting to the Serbians, who continued it as a purely military hospital and permitted it to fall rapidly into a characteristic state of neglect and filth through inability to man it or to administer it properly. It was a great American opportunity missed, through a reason which can only be surmised

American effort was successful, however, in relieving some of these civilian distresses through the clinics established in towns by the Sanitary Commission and by the efforts of some twenty-five independent American doctors who came to Serbia in July, by arrangement with the Serbian Government, and relate the various sanitary and engineering projects and the general relief

were distributed to various towns and villages throughout the country. If the true history of American effort in behalf of Serbia is ever written, the experience of these American doctors will not be the least interesting part of it—and their privations and loneliness in their widely scattered stations, among strange and foreign companions, hampered by native superstitions and handicapped by lack of medical stores, food, transportation and money, will not be the least heroic parts of the story. I have recently heard indirectly from two of them who were overtaken at their posts in mountain towns during the November invasion and who were still awaiting transportation to America at last report.

As I have already stated, we established dispensaries and out-patient clinics, in connection with our sanitary operations and vaccinations, in a number of the towns of Serbia, Montenegro and Albania, and it was my privilege to establish the first and largest of these clinics in Uskub, Serbia, early in May. This clinic was conducted until the close of our campaign, about October 1, and nearly 5,000 cases were seen and prescribed for, from May until September, inclusive. Upon the arrival of Dr. Aldo Castellani, Regius Professor of Tropical Medicine in the University of Naples, who joined our forces and undertook the preparation of his "tetravaccine" for us, I associated him in the Uskub clinic and later on turned over its actual conduct to him, as my duties took me away from Uskub frequently. We hope to report jointly upon this rather remarkable clinic later on. The cases seen were of the most varied and interesting character and included nearly all of the medical diseases ordinarily seen in the cities and country districts of the United States, as well as a fairly large number of diseases usually encountered only in tropical and sub-tropical climates. It is our opinion that Serbia and the Balkans offer a field for medical and sanitary mission work quite unequalled elsewhere on the continents of Europe and America. Owing to the absence of doctors in Serbia, these patients, young and old, Christian and Turk, came from distant villages —travelling on foot, horseback and in carts, sometimes for two days' journey —to the American clinic. Their eagerness for treatment and our inability, in many cases, to provide the proper hospitalization and medicines were often saddening.

A distressing feature of the situation was the famine of quinine, which, in view of the extreme prevalence of malaria of pernicious types, caused much suffering and many deaths. We were constantly besieged by applicants for quinine, but were unable to furnish 1 per cent. of the amount needed.

This specifically illustrates another effect of war upon the civilian population, viz., shortage of medicines and drugs. It was an acute situation, indeed, in the Balkans during the past year; all of the medical stores of the country being in military hands and held for military uses. The drug markets of Salonika and Athens were unable to supply us with all of the needful medicines, even at exorbitant prices; so that after the limited medical stores which we took with us to Serbia were consumed, it became a difficult matter to secure the drugs absolutely necessary for our dispensary services.

I might speak of the psychologic effect of war upon the women, children and non-combatants and attempt an analysis of the effects of fatigue, grief, pain, hunger, cold and deprivation in general, but the subject is too vast to consider here.

Dr. G. W. Crile, in his recent book, "A Mechanistic View of War and Peace," presents such an analysis of the European soldier in battle and hospitals, handling his subject in a masterly way.

I do not enter into the story of our anti-typhus disinfection operations, carried out on a scale seldom, if ever, attempted before; our manufacture and administration to the Serbian army of 200,000 doses of a mixed vaccine protective against typhoid, cholera and the two paratyphoid fevers. Nor will I efforts which occupied us for six busy months in Serbia.

The Sanitary Inspectors' Association of Western Canada

President—E. W. J. Hague, Assoc. Roy. San. Inst. Vice-Presidents—Western Ontario, W. E. Stanley, Assoc. Roy. San. Inst. Manitoba, W. F Thornley, Assoc. Roy. San. Inst.; Saskatchewan, Thos. Watson, Assoc. Roy. San. Ins.; Alberta J. J. Dunn, Assoc. Roy. San. Ins.; British Columbia, F. L. Glover, Assoc. Roy. San. Ins. Executive Committee—W. J. T. Watt; Cert. Inc. San. Assoc., Scotland; P. B. Tustin, Member Roy. San. Inst.; D. Little, Assoc. Roy San. Inst., Winnipeg; E. C. Brown, Fellow Highland Agr. Soc., Winnipeg, Sec.-Treas.—Alex. Officer, Cert. Inc. San. Assoc., Scotland.

PREVENTION OF VENEREAL DISEASES

Read before the Wtunipeg members by HARRY B. WESTON, Cert. Royal San Inst., (late S.B.S., R.N.)

BEFORE entering upon the pros and cons. of the subject in hand, let us consider what is meant by, and included in, the term venereal diseases. In doing so, I wish at the outset, to state that I offer no description or opinion calculated to take the place of medical experts. If my knowledge of the subject is more extensive than perhaps that possessed by some here, I owe it to the fact that it has been gained by years of experience in the treatment of these diseases in the Royal Navy.

In order to have a clear understanding of the problem of venereal prophylaxis, it is necessary to have some knowledge of these preventable diseases.

Those who have not studied the subject, I find, do not differentiate between gonorrhoea and syphilis, but class them as if they were one and the same, under some such vague title as the "bad disorder."

Briefly then, there are three venereal diseases: syphilis, gonorrhoea, and chancroid. Two of them, syphilis and gonorrhoea, are important, because they are very prevalent, and are very serious infectious diseases, with grave consequences. The third, chancroid, does not concern us here.

Syphilis is a communicable disease, acquired by direct contact with infected persons or things. It is divided into three stages, primary, secondary, and tertiary; the latter stages, however are not sharply defined, the one from the other.

Primary syphilis.—About three weeks, and not less than ten days after the receipt of infection, the primary "sore," or chancre, appears, which is characterized by a superficial ulcer, with an elevated margin, and an indurated base. After about two months, it gradually cicatrises.

Secondary syphilis.—From six weeks to three months after the first appearance of the primary sore, some slight febrile symptoms usher in a group of so-called secondary symptoms, which present considerable variety, and include skin eruptions, which are very characteristic, and recognizable by a coppery or "raw ham" color, and a brownish stain left for some time after the eruption has disappeared. The hair becomes dry, and is liable to fall off, there is also ulceration of the throat and mouth, of the rectum, and elsewhere, and inflammation of the eyes.

Tertiary syphilis.—Unless the further progress of the disease be checked by appropriate treatment, in a variable time after the disappearance of the secondary symptoms enumerated, fresh ones are apt to occur, which are termed tertiary. As before stated, these symptoms are not sharply defined from secondary, except that in this stage the disease is more likely to affect the internal organs, and deep-seated parts.

In the majority of cases the infection is transmitted during sexual intercourse, but a minority are contracted apart from this. The infection may be passed from one person to another by kissing. The disease may also be transmitted in wounds inflicted by the teeth or nails of syphilities. Chancre of the lip may be acquired in many ways, such as the use of contaminated cups, glasses, spoons, smoking pipes, etc. The virus may also be transmitted by infected towels, clothing, handkerchiefs, razors, septic surgical and dental instruments, etc.

Gonorrhoea requires little or no explanation. It consists of a purulent discharge from the urethra, and is usually transmitted by sexual intercourse.

The disease is much more prevalent than syphilis. Common opinion regards it as a trivial infection, but as a matter of fact the gonococci occupies a position of high status among the virulent pathogenic micro-organisms. From a public health point of view it does not rank very far short of syphilis in importance, in fact some authorities give it first place.

A few words on the complications and after-effects of these diseases. In the case of gonorrhoea, one may have what is known as gonorrhoeal rheumatism, and there is also gonorrhoeal ophthalmia, that awful condition of inflammation of the eyes which has destroyed the sight of many. The writer has seen such cases in the hospitals. The infection is conveyed to the eyes sometimes by the fingers, a handkerchief, or a towel. I remember a case where a man lost the sight of an eye, the cause being traced to a basin in which he had washed, and which had previously been used, improperly, by a gonorrhoeal subject.

A syphilitic, also, is very dangerous from the first. The chancre or sore, in the primary stage, is capable of infecting, by inoculation, any person whom the sufferer may be foolish enough to have a connection with, the newly infected person in turn infecting others in the same way, and so on, ad infinitum. In the secondary and tertiary conditions, the power to infect is also great, as there is the syphilitic throat and mouth, full of danger.

I could describe to you cases it has been my duty to administer treatment to, the recital of which would fill you with awe and pity, at the thought of the terrible wrecks it has made of these people; but such description does not come within the scope of this paper. No less an authority than Professor Rosenau, speaking of the venereal diseases, says: "As a danger to the public health, as a peril to the family, and as a menace to the vitality, health, and physical progress of the race, the venereal diseases are justly regarded as the greatest of modern plagues, and their prophylaxis the most pressing problem of preventive medicine that confronts us at the present day."

Syphilis lowers the standard of health, and paves the way for other diseases. Syphilitics die early. Most insurance companies refuse these people at any price, and those who will insure them demand heavy premiums to compensate for the extra risk.

Dr. W. A. Evans, in an article in the December number of "The Public Health Journal" says: "That a disease to be worth while, from the public health standpoint, at least two requirements must be met: there must be cases enough, and there must be reasonable possibility that efforts at control can succeed."

The naval and military services of both America and Great Britain are proofs that venereal diseases can be controlled. I speak from many years' experience in the senior service of the latter, and will here enumerate a few of the controlling factors in the Royal Navy.

(1) A man's leave of absence is stopped during the time he is infectious from these diseases. It is a very serious offence for him to break out of this quarantine.

(2) It is punishable to conceal these diseases. (Note, the punishment is for concealment, not for contracting the disease.)

(3) A comprehensive record is kept of all cases. This affords valuable information to the medical department.

(4) A "medical history sheet" accompanies the man wherever he is drafted, stating his history from a medical point of view.

(5) The pay of men suffering from venereal is not stopped, as is, I believe, the case in the United States service. It is a wise proceeding not to stop the pay as this would, in my opinion, be conducive to concealment.

(6) Those men infected, whom it is impossible to find hospital treatment for, owing to location of ship, and who are not victualled in the sick berth, have a special mess, and are guided by stringent rules laid down for their governance, such as to using their own and individual mess utensils, boiling them after use, etc., etc.

(7) In our naval ports the cases are landed and treated in special wards in the R. N. hospitals, and the patients do a further period of quarantine after returning to the ship, until pronounced clear of infection by the M. O.

These are a few of the many controlling factors in this branch of the service, and are enough to show that there is power of control.

The other requirement which Dr. Evans quotes is, "that there shall be cases enough."

As very few cities or towns have begun control of venereal diseases, figures are somewhat lacking.

C. S. Banks of the U. S. Public Health Service estimates that "one person out of every forty has been infected with venereal disease."

The weekly bulletin of the New York Health Department shows that "the total number of cases reported in that city average approximately five hundred a week."

The writer worked, here in this city, with a medical man who treats almost exclusively these cases, and I know that the number must be considerable.

In the British Navy, the figures for 1913 (the latest available), are: gonorrhoea, 5.51; syphilis, primary, .56; syphilis, secondary, 1.68; chancroid, 1.56: a total of 9.31 per cent. from all venereal diseases.

The United States Army returns for the same year are shown as "constant non-effective rate from all venereal diseases, 3.38 per cent.," but as these figures refer only to the number rendered unfit for duty, the total number infected must necessarily be many times greater.

These latter figures are for bodies of men among whom preventive measures are carried out systematically.

The foregoing remarks show that Dr. Evans' requirements are fulfilled, that there are "cases enough," and that "control can succeed."

This being so, let us ask ourselves why more is not done in this direction? I think the reason is due, in a large measure, to a feeling of aversion towards these afflictions. We seem to think that it should not be talked about, a failing we have for putting off this delicate subject. But is this fair to the individuals whom we might have saved from contagion had they only known or whose suffering might have been less had they known where to turn and what to do when afflicted?

We should regard this great-pox as we do the small-pox, and not look on it as a sort of punishment for sin. The victim, or culprit, needs our help, if not also our sympathy, and yet it is startling when we consider that the hospitals of many of our cities and towns will not take in cases of syphilis and gonorrhoea during the acute stage.

The fight against venereal disease is complicated and difficult, owing to its association with prostitution, alcoholism, and the problems of sex hygiene, but that is no reason why we should not be doing something to help along toward better conditions than we have at present. It is doubtful whether our position is as good now as it was in the old C. D. Act days. This Act, passed in 1865, did an enormous amount of good in its way, but after having been in existence less than twenty years, it was condemned by strong public opinion, as contrary to constitutional freedom and public morality, and was repealed in 1883.

One realizes that this country is still too young for us to take any drastic measures, but we could, as it were, put in the thin end of the wedge, and whenever time is opportune we could strike home a little until we eventually had the subject on a solid basis.

I remember some ten or twelve years ago a campaign was started in the Royal Navy to lessen the number of these cases. A prominent feature was the lecturing to the men by an itinerant fleet-surgeon, who in this capacity visited all the naval stations, advising the men on the subject. It was incumbent on all in the service to attend these lectures. This order resulted at first in the petty officers and other married men resenting it, as a slur on themselves and their wives. But when it was pointed out to them by our friend the fleet-surgeon, that though they were not affected, how the knowledge of what to do, as well as what not to do, could be disseminated further, by their aid, to the less fortunate single men, they caught hold of the good work and I believe that the talks in the messes, headed by these same petty officers, did as much, if not more good, than the lectures themselves. If the subject is not too delicate to handle in the service it is not too delicate to handle out of the service.

Would it not be more just to the public to show them where the danger lies? We shall never do it by saying, "It's not my job," and consoling ourselves with the thought that it is one of those subjects that are best left alone. It is our job, to prevent by every conceivable means the spread of contagious diseases. Are we doing the

right thing, then, to let venereal go unrecorded, and to a great extent unchecked? We very properly make tuberculosis (among others) a notifiable disease. I never hear any sane person say this should not be so. If tuberculosis, whose outward symptoms are, comparatively speaking, known to many, and can by this knowledge be largely avoided, surely venereal diseases, whose primary symptoms are not visible, and whose secondary symptoms are known to, and appreciated only by a few, should also be notifiable.

The New York City Ordinance (Sec. 88) makes it incumbent on "the superintendents of hospitals and dispensaries, and of physicians, to report cases of venereal disease."

The section is too lengthy to quote here in full, but it makes ample provision for the reporting of these cases.

In the Northern State of Vermont there is legislation for the reporting by any physician "who knows, or has reason to believe, that a person whom he treats, or prescribes for, is infected with either gonorrhoea or syphilis," with a fine for noncompliance with this law. The same state imposes a fine of $500, or imprisonment, on "any person who marries, knowing himself to be infected with gonorrhoea or syphilis," and a similar fine or imprisonment on "any person who has sexual intercourse while infected with these diseases."

As I said before, I do not think the time has arrived in this country for very drastic measures, but I do think that these cases should be reported by those who treat them. This would put the health departments in a position to know where they stood in relation to these diseases. The notifying would at first present some difficulties, these, however, should not deter us from making a start, and though the returns would at first be imperfect, they would in time round themselves into shape, and be of real value to the departments. The elimination of prostitution is beyond the wildest dreams of any social reformer. It has existed from time immemorial, and will probably exist until the end though we may not be able to stamp it out, yet would the control of venereal diseases lessen the suffering of these unfortunates.

Suitable hospital treatment should be provided for venereals.

Education of the public, by lectures and articles in newspapers, would help.

Every boy and girl reaching the age of puberty might beneficially receive instructions on sex hygiene, and every man and woman of marriageable age should be informed on reproduction, and the dangers of venereal diseases. The object of such education would be, not only to help the individual, but would also result in necessary legislation, and concerted public action. The public could be got at, unostentatiously, by placing in toilet stations and urinals, notices, stating the simple signs and symptoms of these diseases, and advising them if suspicious of infection, to report to the health department, where they could be diagnosed and given the name of reputable medical men who would look after their case, and they would thus be kept out of the hands of quacks and charlatans.

We could talk more on the subject, whenever opportunity presented itself, thus gradually bringing about enlightenment to our fellowmen, and though this consummation may take time, yet can we lift our eyes toward the day, whose coming will bring with it, healthier conditions and a happier community.

. . . .

(Note.—Since this article was written, but prior to it going in print, I was pleased to see a paper advocating the "teaching of sex hygiene in schools," and touching on the "hush" which prevails in regard to venereal diseases. I refer to "A Few Hints to the Medical Profession in Relation to Public Health Work," by Dr. George E. De Witt, which appeared in the February number of this journal.—H. B. W.)

NOTES AND JOTTINGS

We hear very satisfactory reports of the activities of the members in Regina.

* * *

Mr. P. B. Tustin is back after a very successful trip to the coast in the interests of The Royal Sanitary Institute. British Columbia is a long way off and it appears to be very hard to interest the sanitary inspectors of the coast cities in our Association. We are hopeful, however, that Mr. Tustin's visit will have some effect.

* * *

The Executive sent out a number of copies of our constitution to sanitary inspectors in Eastern Canada with the suggestion that the time was opportune for the formation of an association similar to our own. We had one or two replies from interested persons.

* * *

The newly appointed Board of Health for the Province of Manitoba held its first meeting this week. The indications are that some progressive health work will be accomplished by them. They discussed, amongst other things:—The steps to be taken to control tuberculosis; inspection of meats not slaughtered in Government inspected abattoirs; more accommodation for consumptive patients at Ninette Sanatorium; Child Welfare work in rural districts, including the appointment of visiting nurses and educational work at schools or other social centres; the examination of all public water supplies; the occupation of cellars and basements for barber shops, pool rooms, etc.; sanitation in lodging and boarding houses, etc. The Board also considered the recommendation made by your Executive that only properly qualified inspectors be allowed in future to be appointed. Whilst sympathetic towards the proposal, the Board would not adopt the suggestion at the present time as they feared that it might cause conflict with municipal authorities.

* * *

The Executive are to discuss at their next meeting the advisability for holding the annual meeting this year. One should be held, but owing to many of our members being at the front and other reasons connected with the war, things are in a rather disorganized condition in some of the smaller towns. We are sending out a circular asking for the advice of the members at other large centres, and if there is any possibility of getting a fair representation of the members at a meeting, it will be held. If, however, the members advise against the holding of the annual gathering, we shall do our best to keep things up to the mark until affairs are more settled. We shall be glad to have individual expressions of opinion from any of the members who care to write.

* * *

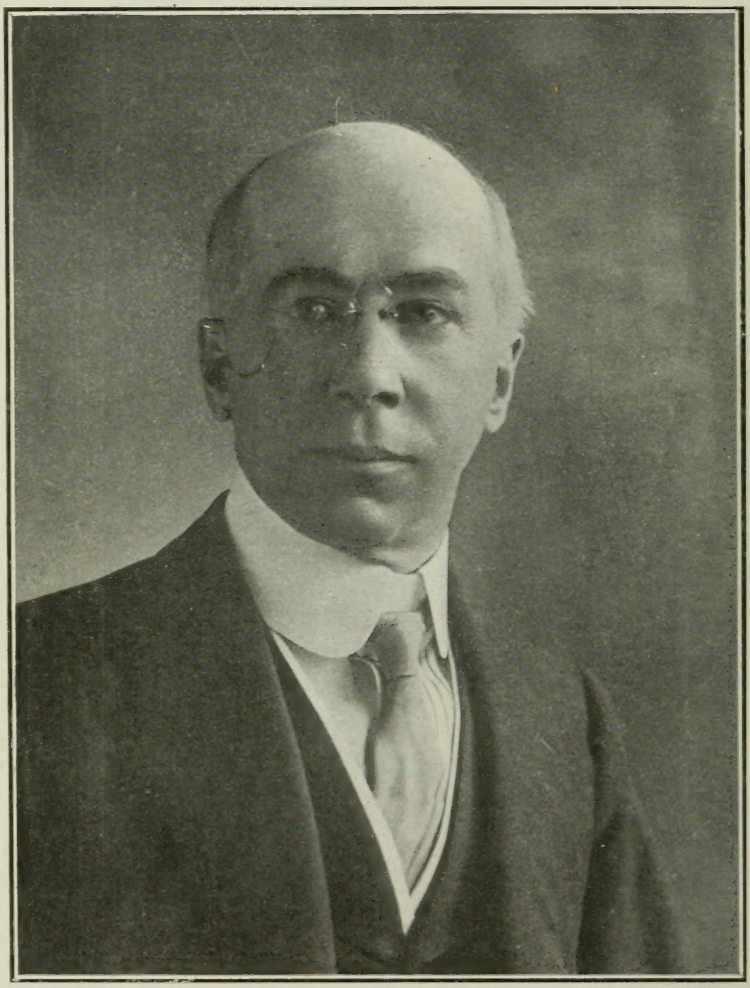
Two more Winnipeg members, Mr. J. Foggie and Mr. P. Pickering, have enlisted for active service this month. Their places have been filled by the appointment of Messrs. A. Aitken and H. B. Weston, both active members of the Association.

Mr. J. Wilson, of Regina, and Mr. W. C. Leggett, of Calgary, have also answered their country's call, so that our honor roll is growing large. All enlisted members are kept in good standing.

ON RAMPART STREET, QUEBEC CITY

Where the 1916 Congress of the Canadian Public Health Association will be held, Sept. 13th and 14th.

Concomitantly will take place the Annual Meeting of the "Canadian Association for the Prevention of Tuberculosis," 12th and 13th, and the Sixth Annual Congress of the "Sanitary Services of the Province of Quebec," 12th, 13th and 14th. Dr. J. D. Pagé, Local Convenor.



DR. H. B. ANDERSON

President, the Ontario Medical Association, 1916